RECREATION

— March 1938 —

Where They Garden for Fun!

Gardening with the 4-H Clubs

By Gertrude L. Warren

The Fordson Horticultural Gardens

By Paul H. Jones

School Gardens Yield Invisible Crops
By Paul R. Young

Development of School Gardening in Boston

By Frederick R. Sullivan, A. B., M. B. A.

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RECREATION

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A Foreword by the Guest Editor

IT IS an honor to be asked to be guest editor of this edition of RECREATION because it is a garden number, a new departure, in one sense, from the regular issues.

The National Recreation Association has started a survey of garden interests for boys and girls all over this country. It is something that many of us who have been long in the field have cherished as a wish to see done but have been inadequately provided with funds or time to do. So it is first my pleasure to congratulate the organization on the occasion of performing this great service for all the rest of us who are interested and working in this field. I am also personally again honored by having one of my own assistants chosen to make this survey.

It seemed wise and expedient to make an initial report of this work — and what appears in this issue by no means covers the field or is in any sense a summary of the plan originally laid down, but it is a gathering together of certain phases of garden work for boys and girls done under different agencies doing their work according to their favorable or unfavorable conditions. Out of this survey have been left some of those agencies which have contributed generously to garden work both for young people and for grown-ups, the newspapers and the magazines. These are purposely left out of the survey because they do not represent what we call technically the great avenues through which such educational work ordinarily runs.

Now, having completed an explanation of the plan of this survey, I would like to say that out of a wealth of experience in this field of work through all the years since I left college, it still seems to me that the garden, properly used as a laboratory, and not only a laboratory but as a book of wisdom, is one of the greatest factors in education. A quotation from Montaigne's Education of Children, which has been quoted many a time, I would quote again here to you. It comes from Persius—

"The clay is moist and soft; now, now make haste And form the pitcher, for the wheel turns fast."

And so this very impressionable clay which we call the young child is helped and molded many times more effectively in his outside and leisure-time interests, perhaps, than through the more routine interests of a classroom. It is for all of us to hold in mind, regardless of the agency, that gardening for children is for one purpose, and one purpose only—education.

ELLEN EDDY SHAW, Brooklyn Botanic Garden.

Spring Came



Photograph by Dorothy S. Allen

During the night Spring came— Quite unexpected Welcome neglected Unproclaimed—

The crocuses and the snowdrops knew
The alpines in their rock clefts knew
The robins and the bluebirds knew
The grass adorned with sparkling dew
And scillas decked in royal blue
All knew—

I sensed a rustling in the night
I watched the clouds in eerie flight
Along the moon's parkway of light
I heard the stars in whispers say
One to another in their way
That Spring had come and come to stay—

So in the morning just for fun I watched a toad blink in the sun Heigh-Ho Spring has come—

F. Ellwood Allen.

Children's Garden Work in a Botanic Garden



Courtesy Brooklyn Botanic Garden

By ELLEN EDDY SHAW

HILDREN'S WORK at the Brooklyn Botanic Garden

differs somewhat from what similar work might be under other auspices. The grounds, the greenhouses, and the scientific atmosphere naturally influence the type of work done. One of the factors that makes the work more difficult than work would be under school auspices is the fact that children cannot be called upon at any time or at regular times as they might be if the work were connected with the school or camp or recreational organization.

The regular garden work is done as a leisuretime project. The garden covers three-quarters of an acre and includes a formal garden with shrubbery, roses, and ornamental beds; perennial bor-

der; annual border; Shakespeare Garden; individual vegetable plots, and experimental plots for children. All these were definitely planned so that the children's garden should not drop into just a proposition or project of raising vegetables and flowers, but should lead out into wider fields of interest.

The first question often asked is "Where do the children come from?" Hold in nine years until they go to college. Others stay one, two and three seasons according to their interest, their success in their work and other outside conditions that influence the factor of constancy. All children entering the summer garden must start in the spring, when garden plans, soil and germination experiments, acquaintance with types

It is with a great deal of pleasure that the National Recreation Association presents Miss Ellen Eddy Shaw as guest editor of this issue of Recreation. This year Miss Shaw is completing twenty-five years of service with the Brooklyn Botanic Garden where she is Curator of Elementary Instruction. During that time she has spoken before many schools, colleges, women's clubs and community groups of all kinds. Because of the inspiration and practical help which Miss Shaw has given there are communities in all parts of the country which are today fostering successful gardening and nature study programs.

of seeds, and all the other factors are taken up that enter into an under-

mind that this is not a charity or-

ganization - that the garden is

carried on entirely for education. The children

apply, are seen personally, must be recommended,

and are taken on their own merits and their in-

terest in the work. The ages are from eight to

nineteen and many children stay from eight or

standing of what you are going to do later in the garden. Each child pays ten cents for his spring instruction and twenty-five or thirty-five cents for the outdoor garden for the season. The garden is open in the summer every morning of the week except Saturday. In the afternoon, crop records are entered, attendance books fixed, extra work is done by the children filling seed packets—all sorts of work go on under supervision.

The question of behavior rarely comes up, since the boys and girls are here because of real interest in the work they are doing. An acquaintance with common garden flowers through the annual and perennial borders and formal garden, with shrubs and trees, is ex-

pected of each one of them. There is a series of pins and medals which may be won by any and every child if he covers the requirements. In fact, it is a competition with one's self. Through these types of work strides are made by the children in their own personal control, in their contribution to group interests, and responsibility which they take over voluntarily or through suggestion. The summer's op-

portunities are rich.

In the fall these same children have the opportunity to enter the fall classes which carry out in part the fall operations in the garden and also the opportunities of working in the greenhouse planting bulbs, making cuttings, and carrying out fall nature work. One of our plans to stimulate independence and responsibility is the silver pin work. Each child, after covering a certain amount of ground, chooses his own special topic either independently or from lists of topics posted. He then works by himself or with a partner

"Nature study and gardening have a fundamental contribution to make to child health education. Unconsciously the child who has observed the care needed by the growing plant—good soil, regular watering, sunshine, air—begins to develop a sense of appreciation and respect for the health care involved in his own growth and development. School gardens have a great contribution to make as laboratories for health education."—Louise Strachan, Director, Child Health Education, National Tuberculosis Association.

Children entering the Brooklyn Botanic Garden to cultivate their garden plots

and his work is Courtesy Brooklyn Botanic Garden

checked through conference with the person who has charge of this work. The work sometimes is in the outdoor garden. For example, what are the best tomatoes to raise in Brooklyn? The student tries out different varieties. Or the silver pin topic may be the "Family of Maples," or "Shrubs That Bloom in the Spring." The group of high

school and junior high school boys and girls (who represent about one-third of the personnel of the garden) raise all the seedling plants for the outdoor garden—hundreds of young plants. This is done in the children's greenhouses during the spring. Such seedling plants as the tomatoes are raised by the different classes in their class period as a part of their work in preparing for the out-

door garden. Again the primary job of this garden is

> education along the lines of character building through such stimulating opportunities as any garden may offer.

> "The man who plants his garden, or plays his violin, or swings lustily over the hills, or talks ideas with his friends, is already, even though in small degree, investing life with the qualities that transform it into the delightful and adventurous experience it ought to be."-H. A. Overstreet in "A Guide to Civilized Loafing."

School Gardens Yield Invisible Crops

"Vegetables and flowers are by no means the only products of Cleveland's school garden tracts. Of greater importance are the desirable habits and character traits developed, the recreation enjoyed and the knowledge and skills acquired."

By PAUL R. YOUNG Supervisor of School Gardens Cleveland Public Schools

ANY PEOPLE know in a vague way that Cleveland has school gardens. How they operate or what they accomplish for the boys and girls who work in them is another matter. Tons of vegetables and bushels of flowers are harvested by these youthful gardeners each season, but the habits, knowledges and skills which the children unconsciously gather with them are the really important crops.

Cleveland has four school garden tracts aggregating about ten acres and providing individual garden plots for some 950 boys and girls, mostly from grades four to eight inclusive. Trained teachers are in charge of each tract and all work

is done under their guidance and supervision, so that costly and discouraging mistakes by the children are avoided. Good soil, adequate equipment and modern methods of culture bring successful crops which, needless to say, are a necessary prerequisite to the less tangible but more important returns.

School-year instruction in science and gardening at the schools equipped with the garden tracts begins, in late winter, to point toward the outdoor garden. Pupils are given the opportunity to enroll for a garden plot, the size varying with the grade and capabilities of the children. Beginning gardens for fourth or fifth grade youngsters are about 200 square feet in area, those for sixth graders about 300 square feet and junior high

gardens about 400 square feet. To enroll, a pupil obtains parental consent and

An exhibit of the products of the Henry W. Longfellow garden tract: happy boys and girls and a goodly supply of vegetables!



Courtesy Board of Education, Cleveland, Ohio

pays a fee of from 40 to 75 cents, depending on the garden size. This payment is required chiefly as an evidence of serious intent, and is used to purchase the seeds used and to provide some prizes for outstanding work during the season.

As the garden season comes on, the science classes use the garden as their laboratory. Children not enrolled for a garden are assigned as helpers to those who are registered gardeners. Thus all receive instruction in preparing the soil, planting the seeds and setting plants, and the work.

of the garden goes forward with the season, during school hours and as a definite part of the school program.

All garden plots of the same size and grade are planted according to the same plan. Typical plans are shown in the accompanying diagrams. Plots are laid out in rows, with two foot paths between. Gardeners enrolled from a particular classroom group are assigned adjacent plots and the work on that group of plots proceeds as a unit. When a certain row is to be planted, a line is stretched in the proper place, extending across all the plots in a given row. After the needed demonstration and instruction each gardener, with his as-

signed helper, goes to his particular plot and does the actual planting on it. When all have completed the work to the satisfaction of the instructor, the line is moved to the next row and the process repeated. Thus, with a row or two at a class period, the planting of the garden is accomplished.

By the time the school year is over in June the gardens are well under way. Children who are enrolled gardeners continue their work on a regular class schedule maintained throughout the summer vacation. They meet as a class group twice each week. Pupils not enrolled lose their

touch with the garden, except as visitors, until school opens in the fall.

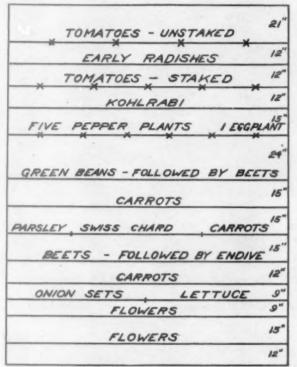
Readers who recall the reluctance with which they as children participated in the care of the family garden "back home on the farm," will perhaps marvel at the fact that there is almost no attendance problem with these boys and girls who are growing school gardens. They come at their appointed time week after week with surprising regularity throughout the summer, and with an attitude which indicates that the work has a real

"kick" in it for them. Of course there are grading systems and awards of various sorts that help maintain interest and that contribute to the character value of the work for the child.

Each youngster is held individually and personally responsible for the work on his garden plot. He is given no help other than counsel, advice and instruction. Results are up to him. Those results, in the shape of vegetables and flowers, are his reward for effort put in. and nature usually sees to it that the reward is about in proportion to the effort. Records kept by some classes indicate that the cash value of produce will average from six to seven dol-

lars for the small gardens, nine to ten dollars for the medium sized plots, and twelve to fifteen dollars for the large junior high plots. One junior high boy who kept a record of his produce had a total value of \$23.14 from his 15' x 28' plot.

Woven around these objective results are the subjective values of the gardens to the children who work in them. The school garden tracts in an unusual degree bring under the control and guidance of the teacher those real life situations and experiences which are now generally accepted as the only effective means of character training. The garden is real, not a school imitation. It is a



FRONT OF GARDEN
BEGINNER'S GARDEN
SIZE - 13'X 16'E'



project carried on by each child as one of a group, and as such he is subjected to group influences and

pressures that provide a socially valuable training.

Character habits and traits inevitably strengthened by the exercise they receive in the garden tract work are patience, industry, carefulness, punctuality, responsibility, consideration for others, honesty, and many others in particular cases. Some of these values grow out of the gardening itself, others out of the fact that it is a group activity. The inevitable response of a garden to careful, patient, painstaking work, and its lack of response to the absence of these factors, is in itself a potent lesson taught by the activity rather than the teacher. The group pressures demanding punctual attendance, conformity to standards of excellence, and observation of property rights, are

influences for good of great importance although the children are entirely unconscious of their action. Garden knowledges and skills are within the province of the teacher and his lessons, and a youngster par-

A row of garden plots at the Benjamin Franklin garden tract. The photograph shows the continuity of the rows across the individual plots as well as the paths separating the plots

graph shows the oss the individual parating the plots two cannot help but acquire a goodly store of

them that will stand him in good stead throughout life, wherever he goes or whatever he does.

Even more immediate satisfactions accrue from this garden work. A few minutes' observation on one of the tracts during a summer day would convince one that unadulterated enjoyment on the part of the pupil is no small factor in his success. The work is fun, and what happier combination than this is to be found? Parents, too, find comfort in the vacation hours profitably employed by their children, away from the dangers of city streets, in wholesome company and healthful environment.

School and juvenile authorities are convinced of the need of playgrounds for our children, and

> rightly so. Could they but observe the values in a properly conducted school garden, their vision of what constitutes a playground could hardly stop with the expanse of cinders or

> > (Continued on page 734)

The gardens which are described by Mr. Young are located at the following schools: Benjamin Franklin, Harvey Rice, Henry W. Longfellow and Thomas A. Edison. Visitors are invited to see these centers.

Learning in a Garden

WHEN THE Camp Fire
Girls write us the stories
of their gardens it is the
notes on what they would do
differently that are the most
poignant. "Next year I'll plant
my seeds as early as possible,"
a fourteen year old girl writes
wistfully—"the time of blooming was all too short." How

many older and more experienced gardeners echo her resolve! Over-crowding, disappointing color combinations, plants that died in the moving, the eternal battle with insect pests, the vagaries of sun and rain, helpful dads and admiring families, all these we glimpse in the garden diaries which the girls send to National Headquarters. They are experiencing at first hand the ups and downs, the joys and disappointments of the gardener, taking, with trial-and-error, trial-and-success, those first steps on the long flower and fertilizer strewn path from which there is no turning. For who, once having nurtured a garden through its first season, can resist the temptation to try again, to do this quite differently and that much better?

Diaries Tell the Story

But share with us the diary of one of the girls. We wish we could quote it all, but here are enough of the entries to give you the color and drama of Estelle Parker's garden from seed to frost, and incidentally, a glimpse of Estelle too.

May 30. I stood bossing the job to see he didn't dig the wrong thing as my father spaded the little garden spot. May 31. A few balsams had reseeded so I transplanted

them to the spots that suited my fancy. In order that the gaillardia plants may grow better, I separated

the plants and replaced them in different parts of the garden.

June 1. It is supposed to be impossible to transplant annual poppies, but I decided to try it. I found that it is possible if you leave enough dirt on the roots and water them frequently.

June 3. In the back of my garden behind the flowers I have a row of

There is much to learn in a garden, and Camp Fire Girls are making many discoveries.

By C. FRANCES LOOMIS

Editor, Department of Publications

Camp Fire Girls, Inc.

vegetables. I planted red kidney beans and radishes. I also planted the newest kind of sweet scented nasturtium.

June 15. The garden needed a little attention so I hoed out the weeds.

June 28. I picked gaillardias for a special birthday bouquet for my little three year old nephew. The petunias that blossomed out today were purple.

July 5. The poppies and more gaillardias began blossoming this morning.

July 12. The beautiful balsam began to show its dainty lavender color today.

July 17. The sun has been so hot for the last few days that I decided to give the plants a drink.

July 19. The next flower that began to blossom was a big double yellow calendula. I also transplanted a few salpiglossis as the moss roses which I planted a few weeks ago didn't come up. The seed was old.

July 25. I hoed the garden and as I have been helping clean the garage I found some fertilizer that the plants would relish. The radishes have been eaten up and in their place I planted lettuce.

August 3. The garden is in full bloom and a most beautiful sight.

August 6. I gave the garden some more artificial rain from the hose.

August 9. The zinnias began to blossom. The first one was quite small.

August 13. The weeds grow exceedingly fast; I had to hoe the garden again today.

August 16. During this whole month the flowers have been in full bloom and a gorgeous sight.

August 21. It rained again today so I was unable to hoe the garden and made a burnt sugar cake instead.

August 23. The family had to admire the big orangered zinnia blossom. It is five and a half inches in diameter and the largest one in the yard. We call it David Harum as it came from seed obtained from that radio skit.

August 27. I took seed pods off the poppies and put the seeds away for next year's planting.

August 30. After I gave up hopes of the nasturtiums ever blossoming, they fooled me and did blossom. They are a beautiful yellow with the green foliage.

September 1. To my disgust the asters that opened were pink and white instead of purple or red.

September 4. Used a little elbow grease on my hoe to the delight of the flowers.

Wild Flowers in the Home Garden

Courtesy Camp Fire Girls, Inc.















September 12. Next year I hope to put my plants out earlier so that I may have a longer blooming period.

It is not necessary, is it, to point out all that Estelle and hundreds of other girls are learning in their gardens?

Luella Hill is thirteen, and she goes in for gourds. Her diary is illustrated with pen and ink sketches and from sprouting seed to leaves, tendrils, flowers and finally the gourds themselves. These few extracts from Luella's diary give you a picture of her gourds, and of Luella too.

July 15. I tilled the soil and planted the gourd seeds on July 15, 1937. The first plants appeared July 19th, four days after planting.

July 30. Today the gourds showed two distinct joints on most of the plants. At each joint leaves were starting.

August 3. The first tendrils made their appearance.

They also originated at the joint formations.

August 7. The tendrils had made amazing growth. They grew two inches then divided into two or three feeler-like tendrils. Some showed indications of curling up. Some of the longest ones measured six inches from the gourd joint to the end.

August 10. Daddy helped me put up a wire fence-

like place for these ambitious gourds to climb upon. In less than half an hour some of the gourd tendrils nearest the wire had begun to wind about it.

August 12. Spent some time with the gourds trying to direct their climbing toward the fence. I noted the aphis had arrived and tried to get them off. The twelve-spotted

beetle had destroyed a few leaves. I killed some of them. Tiny bud-like formations are appearing from the main vine where joints suggesting blossoms are in the making.

August 13. Well, today I have helpers with my gourd insects. The red lady-bird beetles were numerous and after aphis. I hope they remain. There is a fine spine-like formation of the stems and under leaves on main veins. It is sticky and prickly to the touch. It is the same as found on pumpkin and cucumber vines.

August 18. The first bloom appeared. It had four petals and a cone-like center which had six divisions.

August 21. There were two more blossoms. These had the same center formation but had five petals. All the blooms thus far have had small gourds forming at the base of the blossom and are attached to the main stalk at a joint with a leaf right close at the same joint.

August 22. I have been watching a small yellow gourd formation. Today it was the size of an ordinary marble and the bloom opened this morning. I have green and yellow gourds thus far; later two more blossoms opened. These were smaller and have a different center. This type of blossom does not have gourds forming. The squash blossoms are of two types similar to the gourds. The blossoms are always closed by 11 o'clock.

August 23. Measured the longest gourd vine today and it is $4\frac{1}{2}$ feet long, and the joints are about 3 to 4 inches apart. All the vines are climbing the wire mesh

fence and growing as if they liked to reach up. Two blooms with small gourd attached, and five without. Noticed all blooms without gourd formation are low on the vines. When the blooms die they give a twist as if to close and protect the centers from intruders.

September 4. From the time the first blooms appeared there have been a few each day and sometimes quite a large number. The gourds are practically matured now and the vines are beginning to die. The longest vine is about eight feet high. Some of the gourds are pear shaped, others round, while some have a suggestion of a neck. There are all yellow gourds and some with orange stripes, others with white stripes, green with light green stripes, light green with dark stripes, yellow and green, and some light green ones with warts on them.

Mary Alice Snead, too, struggled with aphis, and pays grateful tribute to the ladybug in these amusing verses:

SERVICE

(Dedicated to Ladybugs)

Ladybug, Ladybug, do not fly home No house is on fire and no children will burn. There is food by the mass in the wild cherry tree Awaiting your pleasure, delicious and free.

Give fools their gold, and knaves their power; Let Fortune's bubbles rise and fall; Who sows a field or trains a flower, Or plants a tree, is more than all.

-Whittier.

Ladybug, Ladybug, now you may go.

Your job is done perfectly, all of us know.

Ev'ry aphid is eaten, each leaf clean as new.

And the tree can now thrive again, thanks, ma'am, to you.

Gardening Honors

When we revised the Book of the Camp Fire Girls last year we went into a huddle with garden experts throughout the country and came out with fifty "honors" suggestions of activities the girls could do in gardening. These are, of course, in close relation to the honors in Nature Study of which there are 349. We also revised our requirements for rank, suggesting seventeen different ways in which girls might earn their rank as Torch Bearers, Gardening, Nature Lore and Conservation being three of them. It is no mean achievement for a girl in her teens to earn this rank in gardening, as a glance at the requirements will show:

I. Plant and care for a flower garden and keep a garden diary for three months, including cost, diagram of planting, color scheme, dates when flowers were planted, when they bloomed and when they finished blooming, what you did for soil culture and protection from insects, and notes about results and what you would do differently.

The garden should contain at least five different kinds of plants.

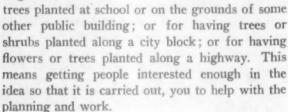
2. Supply your family with two varieties of vegetables from your own garden for one season.

3. Choose one:

A. Design a landscape plot for your home, school, or church grounds, planning continuous blooming from spring to fall, color scheme, shrubs, peren-

nials and annuals.

B. Be responsible for having some unsightly spot in your town cleaned up and improved with flowers, grass, shrubs, or trees; or for having a garden, shrubs, or



Courtesy Camp Fire Girls, Inc

4. Demonstrate to a group two types of flower arrangement and tell how to cut garden flowers and care for them for home decoration.

5. Demonstrate to a group how to prepare the soil for potting a plant and pot it. Explain how the same principle applies to preparing garden soil.

6. Demonstrate to a group how to test soil to show whether it is alkaline or acid and name six plants that grow best in each kind of soil.

7. Earn three of the following Nature Honors: 301, 305, 306, 307, 308, 312, 313, 315, 317, 320, 322, 325.

8. Start a garden reference library, which should include a scrapbook or card file of clippings, pictures, and notes; catalogues, pamphlets and bulletins published by the U.S. Government and state authorities, magazines, and other organizations; books if possible.

Many an older person would hesitate to accept the challenge of these requirements, but the teens have zest and courage and a will to finish what they start.

A Conservation Project

Not all of the girls' gardens are made at home. Some decorate school grounds, parks and roadsides. This year the Camp Fire Girls are stressing



conservation as a special project and among their many activities is the planting of native trees and shrubs. On the school grounds of Ada, Oklahoma, they are planting redbuds; on the school grounds of Atlanta, Georgia, dogwood. In some places the girls have wild flower gardens, but we do not encourage indiscriminate moving of wild flower plants. They are advised to move plants mainly from land that is being broken up for road making or building, and then only under expert advice. The girls seem to be especially successful with trillium, violets and the hardier ferns. At some of our camps the girls have gardens, wild and otherwise, and the gardens are as varied as the locality of the camps-from the cactus garden at the Long Beach, California camp to the fernery at the New York camp.

There is much to learn in a garden and not all of it is about the ways of flowers. We are glad that so many Camp Fire Girls are starting out on the fine adventure of making gardens of their own.

"To those who are contemplating the making of a garden it will be interesting to know that if their labors do not at first bring satisfactory results they may take consolation from the fact that Washington had similar troubles. He was forever experimenting with flowers and soils, and his diaries and letters describing his gardening and farming operations are often frank to confess that as he has not obtained the results he is in search of, he will have to try again."—From George Washington: Gardener, "American Forests."

Children Garden and Grow

others, yes, growing children, yes, growing people, quite like growing things, plants and animals. Take it as truth that children will most attentively attend a plant or an animal. And they will develop as much real responsibility in this relationship as through any other school assignment.

There is no life situation for a child that cannot tie him to growing things, especially plants. Our Los Angeles City Schools give due recognition to this fundamental idea. What is more, we are doing things.

No activity can better test the validity of the new liberalized curriculum for our public schools than can school gardening. Our schools of today are devoted to the individual child and are dedicated to meet his needs for healthful living, social adjustment, emotional stability, recognition of individual interests and abilities, provision of opportunity for original thinking and planning, and for the orientation of the child intellectually and industrially.

Curriculum content and teaching methods of today will be appraised to determine how well pupils are socialized, how efficiently and cooperatively they apply skills and knowledge in solving real problems and to what extent they become contributing citizens.

The work of the school must directly relate to the child's deep constitutional demands. It must be a vital and absorbing life, definitely concerned with life needs and situations, rather than a program of purely intellectual pursuits designed to meet only professional and cultural needs.

The first few years of a child's life are precious and significant in conditioning patterns of response. At perhaps no later age level is it so important to provide experiences which will stimulate desired outcomes. A program of school gardening provides such rich opportunities. It provides opportunity for out-of-door activity which has point and purpose and which is an important factor in conditioning a child's health pattern.

Through group organization and activity the child is provided with opportunity to work with

By VIERLING KERSEY
Superintendent of Schools
Los Angeles, California

"We recognize the 'Little Garden' movement as being a most important phase of education, and we sense it to be one of the most significant of all recreational activities. May it prosper!"

others and to learn the value of cooperative endeavor. Thus a program for school gardening provides rich opportunity for children to become socially adjusted.

Emotional balance is best secured and maintained through wholesome interests and hobbies. How often the emotionally or nervously afflicted person turns to the great outdoors for

quieting comfort and solace!

The school garden program provides opportunity for the pupil to enjoy close communion with the great outdoors, and permits him quite unconsciously to embrace its bigness and relax from the nervous and emotional tension induced by close application to intellectual pursuits.

A program of school gardening enables the child to explore, to seek new interests and abilities and to satisfy the basic urge of working with the soil and plant life which springs from it.

A school garden is a veritable laboratory for a child's introduction into scientific investigation and research. Simple chemistry of soil problems intrigues the childish mind. Plant propagation, budding and grafting challenge his thinking, stimulate his imagination and in the majority of cases induce profitable action.

A school garden is a vital link between home and school. Here ideas are commonly shared, plants and cuttings are exchanged, and suggestions and advice are generously given by the teacher to the child in his home activity. Thus the school garden becomes an integral and vital part of the child's life in his relationship to school, home and community.

School records indicate many cases wherein the civic beautification and planning of entire communities may be traced to the influence of a fine school garden with a fine teacher personality as its director.

Depressions come and go and unfortunately schools, like industry, feel these depression cycles. It is sad to record that during such times some of our most vital school subjects have been termed "extra-curricular" and therefore to be dispensed with in times of stress.

Perhaps it is an ill wind that blows no good, for out of apparent misfortune comes great good fortune. Through the loss of a definite program of gardening activities in many schools during this emergency, it is possible that we have emerged with a program more basic, more substantial and much more productive.

Since individuals engaged in the profession of teaching are now demanding that each step in the educative process have a definite relationship and contribution to the whole, we are ceasing to think of a school gardening program as a separate department wholly unrelated to other school activities. We are now viewing it as a part of the whole, and our school gardening teacher is finding himself concerned with all gardening work growing out of each grade's activities. He will be equally valuable in guidance and direction to kindergarten and sixth grade pupils. His garden area will no longer exist to make a model or show place, but rather it will be an area wherein the actual needs of the children are met through their own thinking, planning, and industry.

Aesthetic appreciations and cultural development will result through the opportunity of growing beautiful blossoms and arranging them artistically in classrooms and halls.

The school garden will become a center of community activity through the desire of a far-seeing and deep-thinking leader who senses the possi-

bility of serving community needs.

No longer are we thinking in terms of traditional subject matter as the core of our school curriculum. We are endeavoring to give children actual experience in planning, executing and evaluating the activities which relate to

"To grow something out of the soil, to work and tend it with his own hands, to reap a harvest of beauty or a bountiful meal, brings into the heart and life of the little child a consciousness of his reliance upon Mother Earth and a love for the soil which helps to clarify his thinking, to make cleaner and better his living, and to ennoble his soul." — Willis A. Sutton, Superintendent of Schools, Atlanta, Georgia.

their personal living. A school gardening program provides rich opportunity for children to explore a wealth of activities directly related to their personal living. In so doing they may grow in healthful living, in social adjustment and in emotional stability. Children will tap new interests and develop new abilities.

They will develop cultural and aesthetic appreciations which make for more colorful and satisfying living.

From a brief supplementary report of school gardens in Los Angeles elementary schools, we learn that there are about 190 elementary schools—nearly two-thirds of the total number—maintaining sizable gardens. These average about 7,000 square feet in size and all but three of them are located on school grounds. Many other schools are cultivating small areas in nooks and corners and along the margins of school grounds.

In the regular elementary schools, at the present time, gardening instruction is given largely by classroom teachers. There are, however, about ten teachers who might be classed as "special" because of their training and the amount of time which they devote to gardening activities.

In most schools having gardens children of several grades participate, and in some most of the grades have gardening. Garden experiences are supplemented by a variety of studies of plants,

animals and insects conducted in the classrooms, such as miniature gardens, cactus bowls, potted plants, terraria and aquaria, steads and similar projects. Three garden centers maintained with NY A aid supply much plant material for use inside and outside of schools.



Courtesy Brooklyn Botanic Garden

Gardening with the 4-H Clubs

4-H CLUB WORK is based not only on the needs and interests

By GERTRUDE L. WARREN U. S. Department of Agriculture

young people are being kept in touch with the best in home and farm life, and are develop-

of 4-H club members, but also on the needs and interests of the agricultural community of which they are a part in accordance with the objectives of the general extension organization under the direction of the State Colleges of Agriculture in cooperation with the U. S. Department of Agri-

culture. Rural young people in their organized 4-H clubs feel that they have a useful part of the world's work to do, and that in doing it they may

grow mentally, socially and spiritually. They also feel that they

have a definite responsibility in improving their community and in making it finer in every way.

In all such work, learning to make contacts with outstanding men and women of the community in positions concerned with the public welfare has been emphasized as an important step in learning to serve one's own community effectively. Moreover, reports indicate that young people in such work have been afforded a delightful opportunity to work side by side with their parents and neighbors. They have learned to recognize and to meet local needs under varying circumstances, and thereby have gained valuable experience as young citizens. If enough provision is made for exercise in assuming responsibility, reports indicate, an increasing number of

better place in which to live.

In this connection, the 4-H garden and orchard club work has played a prominent part. During the last year 4-H home garden club members totaled in all more than 200,000—a considerable increase over the preceding year. In addition, over 12,000 were enrolled in the market-garden work. In all, nearly a million

bushels of vegetables were pro-

duced, much of which were grown in accordance with a garden budget plan for the entire family. Frequently it has been noted that the making of a budget one year has been the cause of planning more carefully a garden and canning the surplus the next year. In a few states 4-H club girls became interested in herb gardens and the use of herbs in their 4-H food preparation

In the flower-garden work, including the beautification of the home grounds, there was a total enrollment of over 80,000 members. Of particular interest in this connection were the stories of 4-H club girls and boys who took entire charge of their home-yard improvement work and demonstrated in an outstanding way how to improve the soil for planting, select and

An Oxford County, Maine, boy makes tomatoes his chief crop





And in Walton County, Georgia, the study of flowers proves interesting to 4-H Club girls

transplant native trees and shrubbery, treat walks,

drives, or fences, develop mass plantings and screen unsightly buildings. Beautification of road-sides, village greens, and public grounds in general also received much attention by many 4-H clubs.

Although relatively new, of importance in providing ample fruit for the farm family, were the 4-H orchard-club demonstrations under way, in which much care was used in determining the number of fruit trees, bushes and grapes necessary, from the standpoint of the nutritional needs of all members of the family. The orchard plans, once worked out, were conscientiously followed by all 4-H club members enrolled for such demonstrations. According to the last reports, there were nearly 20,000 of these members who produced over 60,000 bushels of fruit. Most of the garden and orchard club work was conducted by 4-H members in relation to the nutritional needs of the family, yet in many instances considerable financial profit was realized.

The 4-H club girls in South Carolina were so deeply interested in gardens and flowers that 500 of them had hot beds made for starting their vegetables and flowering plants and 1,267 of them

did some phase of home beautification work.

In old Virginia, Ossie Wade reported having a garden 90 feet wide and 210 feet long which fed three people all season. In addition, a considerable amount was canned or stored for the winter. Ossie's record book shows fertilizer, plowing and other expenses amounting to only \$10.75.

In Pennsylvania, 4-H reports show that with such special crops as sweet corn, tomatoes, cantaloupes, cabbage and cucumbers, there were 1,352 members who also kept cost account records.

In many states all club members, both boys and girls, as has been the practice for a number of years, checked their food and health habits and gave special attention to the raising and preparation of those fruits and vegetables found lacking in their diet. In addition, 4-H club members during 1937 canned their garden surplus amounting to several million jars of vegetables. Much attention also has been given by 4-H club members to the proper preparation of fruits and vegetables for exhibit at 4-H Achievement Day meetings and county 4-H fairs, as well as for display purposes in connection with the selling of the surplus on curb markets or at roadside stands.

(Continued on page 734)

Teaching Agriculture in a City High School

The methods by which agricultural courses are conducted in a city high school, and the results secured in twenty-years of experimentation are described in this interesting story

By THOMAS P. DOOLEY
Head of the Agricultural Department
Jamaica Plain High School
Boston, Massachusetts

Our Vocational Agricultural Department in the Jamaica Plain High School, according to the records of the United States

Department of the Interior, is now the largest agricultural department in the state and the second largest department in the United States in a strictly city high school. Our present enrollment is 160 pupils, an increase of 55 per cent since 1931. Large as it is, however, there has been no stampede into this department, and its enrollment is but a modest fraction of the 32,000 high school pupils in our Boston high schools. We have heard about farm boys moving cityward. This department is for boys facing farmward.

The course covers three years, one half of the school day being spent on agriculture, and one half on the best general education the high school has to offer. Instruction is both scientific and practical. The pupils are taken out for actual agricultural observations and practice every week by their instructors.

Boston and its immediate vicinity has led in the development of new varieties of plants such as the Concord grape, the Baldwin and Roxbury russet apples, Bartlett and Clapp's pears, Boston Market celery, Golden Bantam corn, Mary and Martha Washington asparagus and many others too nu-

merous to mention. The Farm and Trades School on Thompson's Island, Boston Harbor, has been teaching Agriculture since 1931 with Boston boys leading in attendance. Private societies have been conducting garden work for forty odd years prior to the organizing of this work.

Resources Near at Hand

Around the fringe of Boston's border line we find

Out of the happy and successful experiences which 10,000 elementary school children of Boston in the school and home garden projects made possible by the School Committee in cooperation with the Park Department, Women's Municipal League and other local groups, come a number of pupils each year who want to follow agricultural careers. To meet this need the School Committee, since 1918, has been conducting agricultural courses at the Jamaica Plain High School. Each year the enrollment has increased and interest grown.

poultry, turkey, swine and dairy farms in Needham and Dedham, and market gardens in Arlington and Belmont. Within Boston itself might

be listed the great Faneuil Hall market, the flower marts on Tremont Street, the big fruit auction, potato market and milk center located in Charlestown, the Boston Park System, the Arnold Arboretum, the huge estates of Jamaica Plain. In the nearby communities we find flower, vegetable, poultry and fruit stores, ice cream plants and stores, and landscaping around the smaller estates and homes.

The Department has a large bus and a station wagon type of car. In these the pupils are safely and quickly conveyed by their teachers to scenes of professional agricultural activity, such as Esty's market garden in Newton, Cochrane's poultry farm and Whittemore's fruit farm in Canton, the Arnold Arboretum in Jamaica Plain, DeLuca's greenhouses in Dedham, and the dairy manufacturers plants in the immediate vicinity of this school. Thus these pupils "learn by doing" and make valuable seasonal contacts on farms and other centers with men actually engaged in their daily professions of agriculture. When spring arrives these students are released from school, "A" students about May 1st and "B" students on May

15th, if they have satisfactory places of agricultural employment. They carry on their farm practice through the summer under the supervision of their employers and guidance of their agricultural teachers who visit them every two weeks to advise, encourage and instruct them while they are "on the job." They "learn while learning."

To round out their training these pupils visit all the nearby agricultural fairs, such as Brockton, Topsfield, the Boston poultry show and the spring flower show to exhibit and judge vegetables, poultry, fruit, flowers, cattle and milk. Here they compete with pupils from other agricultural schools of the state, and Boston's city-trained pupils have won many ribbons, medals and cups for state championships in judging

vegetables, poultry, cattle, fruit and flowers. Three to four hundred of these prizes are given out at the annual spring agricultural assembly each

year.

At the recent Topsfield Fair, the flower and cattle judging teams won first places and the fruit team third place honors-a fairly good accomplishment for city boys competing against farm lads from the more rural agricultural schools! The flower judging and plant identification teams from this school have won first team honors for four years at the annual spring flower show held in Boston under the auspices of the Massachusetts Horticultural Society. The exhibits of typical city landscape problems vs. a "city back yard garden," "penthouse garden," "window garden," have been awarded the Society's silver medal for six years. This school has been called a "prize winning outfit." Prize winning teams, like winning athletic teams, are merely incidental parts of education used to motivate better classroom work, teach pupils to attend fairs, to learn good plant varieties and touch elbows and meet the pupils from other schools in good natured rivalry.

The Massachusetts Horticultural Society and similar organizations are now cooperating with our school in building up a very healthy cooperative relationship by developing judging contests and sponsoring exhibits of typical civic improvements. Annually this society employs from twenty-five to fifty of our pupils as guides and assistant horticultural judges at their spring flower show. On an average, four hundred pupils from the school pay a small admission fee each year to see these beautiful shows.

Summer Work

Of the total of 160 pupils in the courses, 95 per cent were engaged in successful practice during the past summer in spite of employment difficul-

Mr. Dooley pays tribute to the work of his five fellow agricultural teachers at the Jamaica Plain High School, all trained specialists in agriculture and education, who are untiring in their efforts to maintain the highest possible standards in the agricultural courses, to the head master of the school, to interested city, state and national officials and to the Agricultural Advisory Committee whose advice and cooperation have contributed to so great a degree to the success of the project.

ties and discouragements which face city pupils working on farms and estates throughout Massachusetts.

Twelve out of sixteen seniors who had completed our three-year course carried on, although summer practice for them is not compulsory. Graduates of this course are now living throughout the New England states, managing farms and market gar-

dens, conducting flower stores, serving as chemists in dairy plants, teaching agriculture, and working as agricultural scientists, agricultural radio announcers, landscape gardeners, poultrymen, foresters, fruit growers, greenhouse workers, nurserymen, greenskeepers, golf course managers and estate managers.

Agricultural employers are now asking for the services of our pupils during their busy seasonal periods, during the summer and after graduation. These employers invariably are very enthusiastic about these city school trained pupils.

The Process of Selection

Last spring the pupils were allowed to leave school for summer agricultural practice from May first on, depending on their scholastic grades. A very marked reaction came from employers, pupils and teachers; still greater results will be attained as this device is further worked out.

A very notable piece of pioneer work which has attracted wide attention is the device for finding the right type of students for these courses. Candidates are urged, at the spring meeting in the high school for enrolling, to work during the coming summer on farms, estates and home gardens under the supervision of the agricultural teachers, as a means of proving their interest and their aptitude for agricultural careers. Each year approximately forty per cent of the candidates find by such actual working experience that this type of education is not to their liking and do not return in September. Thus the School Committee saves much money, teachers are able to concentrate on pupils with a sound background, and the pupils are helped to find themselves.

Sharing in Community Activities

During the latter part of May 1935, our Department cooperated with the Boston Welfare

Department in making a survey of all available plots of land in Boston which might be used as sustenance gardens during the summer. About fifty pupils surveyed, drew plans and described these plots. Again this department has cooperated with local churches, schools and other groups in planning and carrying through civic improvements.

Our department, although it is now limited to 180 pupils, is equipped to extend training in agricultural education to an increasing proportion of our population and is desirous of doing so. Yearly it is finding new outlets for the better training of its students and for helping the citizens of Boston in civic development problems along both agricultural and horticultural lines.

Ours is not a "dead end" course. Graduates may attend the Stockbridge School of Agriculture at Amherst for a year or may enter the four-year courses at the Massachusetts State College at Amherst, and many have done so. Five graduates of this department did post-graduate work and received degrees of Doctor of Philosophy from Harvard University. They are now holding re-

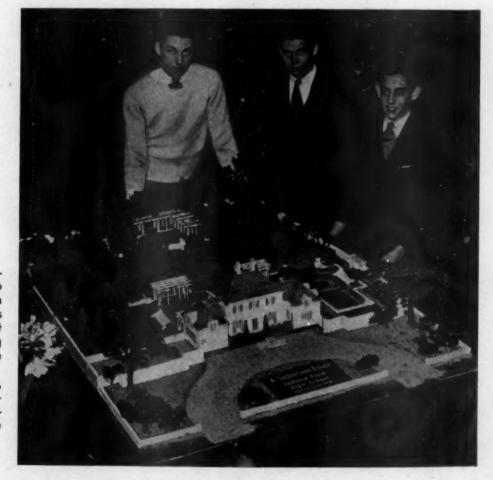
sponsible agricultural and biological positions in various parts of the United States. Over thirty trainees carried on with college or additional study to fit them for higher positions. This vocational course has never been a barrier to higher education; experience indicates that

it has been the means of inspiring many boys to heights they would otherwise not have attempted.

Our twenty years' experience in conducting courses and the concrete results secured in the establishment of scores of our graduates in agricultural pursuits, have led us to believe that our Boston School Committee has been justified in establishing and fostering these agricultural courses.

"The general trend of many phases of both general and special education is to carry most pupils away from a complete consideration of their nature environment. Life in the congested parts of our cities permits no appreciation of the plant and animal life of the fields and forests. The movies, the struggle of parents to earn at least a fair living, the desire of young people to prepare to earn money, the occasional dislike of school and other factors seem to make many children indifferent to the natural environment of their suburban homes."

—Marvin M. Brooks, Director, Nature Study and School Gardens, New York City Schools.



This exhibit, arranged by a group of Jamaica Plain High School boys and displayed at the annual spring flower show of the Massachusetts Horticultural Society, in 1934, represented a miniature suburban estate

Helping Children's Gardens Grow

THE OUTSTANDING
example of the
work of the garden program of the
the National Plant,
Flower and Fruit
Guild is that of the

New York City branch, whose president is Mrs. James Roosevelt, which maintains the children's gardens on Avenue A on

a plot of ground comprising three city blocks, from 64th to 67th Streets, loaned to it for this purpose by the Rockefeller Foundation. These gardens were organized in 1911. The first year saw the enrollment of sixty-four little gardeners from among the children of the neighborhood. Later a plan was worked out whereby a little plot was given to each child in a group of boys and girls convalescing from cardiac diseases and tuberculosis. This proved most beneficial. Mr. F. Stanley Howe of the Rockefeller Institute, in an article about the gardens which appeared a few years ago in the Homoletic Review, said: "When an epidemic swept over the city in 1916 and public playgrounds in the district were closed as a precaution against its further spread, these gardens were kept open, and a careful check by the garden director after the epidemic had passed showed that not one of her little gardeners had been afflicted."

An important phase of these gardens is the educational value they have for each child. Under the supervision of Miss Henrietta Munckwitz, the garden director, the children are taught the planting and cultivating of their flowers and vegetables, and with this individual work lessons are also given, by observation, on the growing of various plants and medicinal herbs, and instruction is given regarding their use and

given regarding their use and their value to man.

The little garden plots measure about 5' x 10', and there are so many children applying for garden space that sometimes several are assigned to one plot. More than 2,000 children enjoy the privilege of working in these gar-

Since its inception in 1893, the National Plant, Flower and Fruit Guild has encouraged the making of gardens by children and the formation of garden clubs for boys and girls. This it has accomplished through its various branches and clubs-

By IDA WHITE PARKER Executive Secretary dens. The Guild frequently speaks of them as its "League of Nations" since seventeen different nationalities have been represented in a

single season.

Planting Day, when the gardens are opened each spring, usually in May, is a gala occa-

sion. There is a flag raising, talks are given, and ice cream is served. On Harvest Day, in the fall, when an exhibition is held showing the best products of the gardens, there are again refreshments and prizes are awarded. The gardens are then "put to bed" for their long winter nap until the spring returns.

In Other Cities

The branch of the Guild at New Canaan, Connecticut has since 1923 maintained extensive gardens. The report for 1936-37 showed an enrollment of 240 children who, under the direction of Miss Katherine O'Brien, supervisor of the gardens, were taught how best to raise vegetables and flowers for home consumption and for sale. Picnics and a Field Day always formed part of the summer's activities, and a real festival is held on Achievement Day when an exhibition of vegetables and flowers grown by the children takes place. This usually brings a large crowd of interested parents and friends to see the awarding of the certificates of merit of which nearly 100 were distributed last year. The coveted award of attendance at the short course at Storr's Agricultural College was won by three girls and one boy.

In 1926 the Brooklyn branch of the Guild established a garden for the children in the Home

for Consumptives. Through the cooperation of the Brooklyn Botanic Garden seeds were distributed and the planting supervised. Vegetables were grown as well as flowers, and after harvest the fresh vegetables were eaten by the children while the flowers

(Continued on page 736)

All my hurts

My garden spade can heal. A woodland walk,

A quest of river-grapes, a mocking thrush,

A wild rose or rock-loving columbine.

Salve my worst wounds.

-Emerson..



Courtesy Jamaica Plain High School

The Development of School Gardening in Boston

Boston, which has ever been a pioneer in eduBy FREDERICK R. SULLIVAN, A.B., M.B.A. Chairman, Boston School Committee, 1936-1937

bution to gardening when, in 1901, it appropriated money for

cation, may well claim credit for leadership in the school garden movement in America. It was in our city, which founded the first public school in America (The Boston Latin School), the first high school (English High School), the first girls' high school and the first commercial course, that the first school garden in America was fostered.

In 1890 the Massachusetts Horticultural Society took the initial step toward introducing gardening into the school program by sending Henry Lincoln Clapp, Master of the George Putnam School, to Europe for a survey of school gardens then operating on the Continent. On his return he organized and conducted a garden upon the grounds of his Roxbury school. His early efforts became a model for other schools to follow.

As the pioneer work of Mr. Clapp received appreciation in Boston, other public-spirited groups took up the task of making this educational and avocational opportunity available to greater numbers of young men and young women. The Twentieth Century Club, the Ruggles Street Neighborhood House, the South End Industrial School and the Women's Municipal League made possible a fine start in children's gardening. The Boston School Committee gave its first financial contri-

a large garden at the Boston Normal School.

The school garden movement stands as a memorial to city planning, for in the early nineties some old tenements were razed to furnish the necessary land for the gardens conducted by school children near the Hancock School in the Old North End, then one of the most congested sections of the city.

Of great value in the early success of school gardens was the enthusiastic espousal and support of the cause by the Massachusetts Horticultural Society. From the very start, donations of plants and seeds to the children, encouragement of perfection in culture through the offering of awards, and annual exhibitions provided stimulation to these gardening efforts.

The World War and the sharply rising cost of food gave great impetus to the school gardening movement. The boys and girls of Boston responded patriotically to the call for production, and in one year during the crisis 10,000 home gardens were supervised by our teachers and 5,000 young workers conducted gardens on vacant lots, school lawns and even on historic Boston Common. In that period the School Committee and the Park Department cooperated to conduct what is probably the largest school garden project ever

established in this country. Twenty-six acres of our Franklin Park were plowed and staked off into individual gardens. Pupils from sixteen schools in the neighborhood successfully grew crops, and 3,500 young people participated in the work. During the first year Thomas P. Dooley, now head of the Agricultural Department of the Jamaica Plain High School, and John L. Mayer, sub-master of the Dearborn School, were in charge.

As a result of the valuable lessons derived from the war gardens enterprise, the Boston School Committee established a permanent staff to supervise this activity. Previous to 1917 we had carried along the program under the supervision of the individual school masters, and until 1918 gardening activities were coordinated by a temporary director. In that year Daniel W. O'Brien was appointed permanent Assistant Director of the Department of Manual Arts in charge of school gardening.

The Present Garden Program

The Boston school gardening program is now conducted under the supervision of a permanent staff of employees and maintained by an annual appropriation of the School Committee. In addition, credit and thanks must be given to the agencies and Associations outside the School Department for their great assistance in many ways. Through their cooperation the youngsters of Boston have an opportunity to learn of living, growing things by actual contact with them.

At the present time Boston has seventeen school garden plots in which hundreds of children work and study. Some of these garden plots are worthy of special note. In the Mattapan section of Boston an institution known as the Prendergast Preventorium, which is supported by private charities and by the proceeds of the sale of Christmas seals under the direction of the Boston Tuberculosis Association, offers a splendid chance for beneficial work in gardens. This health protection camp, devoted to assisting undernourished and potentially tubercular children is, in a sense, a part of our Boston School system, since it is included in one of the Boston School districts and Boston teachers are assigned to give instruction to those children confined there. Here a school garden plot offers opportunity to develop the health and strength of children threatened by dread disease.

The Norfolk House of Roxbury has for many years been actively cooperating with the Boston

Public Schools in the management of two gardens within the neighborhood served by this institution. Such an arrangement is very helpful to us, for we can rely upon experienced workers in social service to make contacts with the children within the section who are most interested and most likely to benefit from the work and play of the school garden.

Still another phase of our program is the gardening and recreation project in which our School Department cooperates with the Women's Municipal League and the Park Commission in furnishing out-of-door opportunities to the children of the North, South and West End sections of the city. In the heart of a fine market garden district in the city of Woburn, Boston owns a large farm. Once the estate of Mrs. Mary Cummings, it was devised by her to be used as a pleasure ground for the people of Boston. Our public schools have cooperated in the proper utilization of this land by furnishing instructors, seeds and equipment for four hundred children who are transported to the estate by busses on three days of each week during the summer. As supervisor of this project, Mr. Dennis M. Crowley of the Jamaica Plain High School has developed an elaborate program that includes games, nature walks and a productive program of gathering profit from the children's work.

The Women's Municipal League has, with our cooperation, furnished the opportunity to children of our crowded districts to be away from the heat of the city and out in the green fields. A graduate student at Harvard, Dr. Oswald Tippo, now instructor of Botany at the University of Illinois, has directed the nature training of these youngsters, and few children have ever known such an enthusiastic and inspiring helper in the nature search. All products harvested in the gardens are taken home by the children who grew them. While the amount of vegetables grown by any one youngster is necessarily small, yet it is conceivable that on some of Boston's dinner tables they are a worthwhile addition to the meal.

As an example of the value of the help received from the Women's Municipal League it is interesting to know that in 1937 this body supplied children's lunches for 5,040 days of pupil attendance.

Home Gardening

From the war gardening days has come a valuable contribution to my present gardening program in the realization of the importance of the school plot in stimulating the improvement of home gardens. Supervision of home gardening for school children has been a practice through the years, and at the present time there are over six thousand children carrying on this profitable and healthful activity each summer. Many a back yard which has been an eyesore has been converted into a beautiful spot, and many an attractively landscaped home in Boston is the direct result of early inspiration gained in the school gardens of our city. That this love for horticultural attraction is actively showing itself in Boston was proved last March when 5,000 Boston

children paid twentyfive cents each to visit and admire the spring flower show of the Massachusetts Horticultural Society at Mechanics Building.

During the spring of 1937, former Mayor Frederick W. Mansfield initiated a campaign designed to awaken in the citizens of Boston a desire to clean the city streets and to beautify lawns as part of the project. His campaign was well received by the children in the schools, who reported, as a result, the cleaning of 60,000 yards, the planting of 7,000 shrubs and 4,000 trees, the grassing of 11,500 lawns, the creation of 50,000 gardens and the pruning of 16,000 trees and shrubs.

Living Materials for Class Study

To keep alive appreciation for the wonders of nature during the inactive months and to help in the teaching of biology through living

materials, the School Garden Department supplies to science teachers in our various districts potted plants and other materials for class study. These plants are grown in our greenhouse, and during the past year over 3,000 pans of tulips, hyacinths, and narcissi were used in science and art classes in the Boston Public Schools. This service to the teachers of science and art is in addition to the use which they make of the plants growing upon the school plot. Wherever it is feasible to do so, our department establishes the school garden upon the school grounds so that teachers may utilize garden plants in their class work.

Garden clubs in the school furnish an outlet for

our youngsters who like to carry on their gardening, as all good horticulturists do, even outside the official season. Regular subject teachers find that the club helps to motivate pupils in their class work and

has a stimulating effect upon success in their studies.

In some of our schools annual local exhibitions and flower shows are held. Miss Mary Shea, a teacher who is intensely interested in horticulture, guides the children of the Longfellow School, Roslindale, in conducting an annual flower and vegetable show that has become the community's pride.

Exhibitions and Medals

Another splendid feature of the school garden program in Boston, and one for which we of the School Committee are grateful to the Massachusetts Horticultural Society, is the (Continued on page 736)

A gardener at the Woburn Garden on the Cummings Estate at Woburn, to which the children, in groups of a hundred, are transported in busses through the cooperation of the Women's Municipal League which is playing an important part in the development of the garden program. The League is also supplying milk and crackers to supplement lunches brought by the children from their homes.



ourtesy Women's Municipal League

Children's Gardens as a Community Project

Cooperation provided the answer to one community's organization problems when children's gardens were being initiated

FOR AT LEAST two years attempts had been made to organize a junior garden club in Hastings-on-Hudson, either under the sponsorship of the Gar-

den Section of the Woman's Club, or of the Recreation Division, or jointly. The first season we tried to organize a club for juniors we were unsuccessful because we waited until midsummer and by that time the children were scattered and had other interests. We also found that because of limited leadership it was difficult to organize garden clubs on the playground.

The present club of thirty members came into being somewhat accidentally. Early in May 1937, the guidance counselor of the junior high school assigned a seventh grade classroom project as part of the junior high school health and guidance program. The children were asked to plant some kind of garden at home, either a window box, flower or vegetable garden or just a pot of flowers. The objective was to stimulate interest in outdoor activities which might improve health and prove an enjoyable use of leisure time. About that time the Garden Section of the Woman's Club again decided to sponsor a junior club and asked the cooperation of the school. The chairman of the committee and the guidance counselor saw the possibilities of using the project already under way. With this classroom group as a nucleus the Junior Gardeners Club was organized in June as an extra-curricular activity in the junior high school. In order to encourage the children and show them what can be accomplished we took the club members to visit the beautiful gardens on the estate of Samuel Untermeyer in Yonkers, New York early in June.

A committee was appointed from members of the Garden Section of the Woman's Club and the Hastings Garden Club which was called the Junior Gardeners Council. This committee asked other members of help." — El

By MILDRED DAVEY
Guidance Director
Board of Education
Hastings-on-Hudson, N. Y.

both clubs and interested citizens to serve as inspectors of the children's gardens during the summer. One of the inspectors was a member of the Board of Educa-

tion, whose hobby was gardening. Another was a mother of the president of the junior club. These inspectors worked faithfully all summer visiting the gardens at least twice a month and keeping records, and were especially helpful in giving suggestions and advice to the young gardeners. Awards were made in September after school opened on the basis of the respective ratings. Entries included window boxes, large flower and vegetable gardens, front door gardens and potted plants. Children from all sections of the village shared in the experience. Prizes and ribbons were awarded to about fifteen of the contestants, not all of whom were club members.

The Recreation Division obtained the services of the nature specialist of the Westchester County Recreation Commission to meet club members several times during the summer in order to keep interest from lagging. Such activities as the making of leaf spatter prints were conducted on the playgrounds. Hikes to nearby woods for wild flower study were arranged.

Announcement of the club and the type of activities it would sponsor appeared in the junior-senior high school students' handbook in September 1937. This made the children aware of the fact that their club was sponsored by the general organization of the high school and was recognized as a regular school activity. When the first club meeting was called we were amazed to find that about thirty of the children wanted to continue as a club group. The fall activities were planned to include an all day trip in the school bus

to the Bedford nature trails in October. The day was spent exploring the nature trails in the Poundridge Reservation in north-

(Continued on page 738)

"I feel that gardening is very valuable to any child and that the work is bound to be of great help." — Eleanor Roosevelt.

Garden Clubs as an Educational Factor

in

North Carolina Public Schools

By JUANITA McDougald Melchior

THOUGH leaders in vocational education and agricultural extension work had promoted gardening for certain age groups in rural North Carolina, it was only when unemployment and starvation began to show their menacing faces in the late twenties that school and home gardens received their real impetus. It was then that the

Governor of North Carolina initiated a Live-at-Home program through the cooperation of various state agencies. A special bulletin for schools was issued by the State Department of Public Instruction emphasizing the educational procedures and cultural values as well as the practical benefits to be realized from the maintenance of gardens yielding the year round.

This subject proved to be a vital instructional device in that it afforded a natural life experience as an outlet for human urge to do real things—to be curious about growing plants, insects and animals, to plan and to experience the satisfaction of concrete achievement as the reward of effort.

The effort made during the depression to meet as far as possible the needs of growing boys and girls at the various levels of the eleven year period emerged into a concerted move toward revamping the public school curriculum under the leadership of the State Superintendent of Public Instruction,

the late Arch T. Allen. Laymen and lay organizations were invited to make suggestions about the kind of education they wanted for their children and for the North Carolina of the future.

"I should wish all my children to be sensitive to all those aspects of earth and sky that can move the soul with loveliness and sublimity.... Certainly I should like them to be at home with Nature's infinite variety; to love not merely her verdure and blossoming but her mystic mists and yellow decay.... I think I should have a course in Nature running pleasantly through my children's years."—Will Durant.

Gardening Enters the
School Curriculum
Among others who responded was the State Fe

Among others who responded was the State Federation of Garden Clubs. This organization requested a state-wide school campaign for the beautification of homes and schools along highways, and incidentally the organization of the junior garden club which would reach all ages and groups

among school children. This request was favorably received and it was the writer's happy privilege to represent the department in promoting this object, being more particularly responsible at that time for the fields of science in the elementary schools, and health, physical education, art and citizenship, including geography, for the eleven year program.

In the record of experimental curriculum experiences contributed through teachers' reports gathered from all over the state, gardening was listed as a satisfactory educational activity and was therefore included in the final bulletin report for continued use as an activity. A bulletin on how to organize and promote junior garden work was prepared. Each adult garden club was requested to appoint a member as a junior garden club sponsor to work with the teachers in the local school. More recently an additional source of cooperation came with the appointment of a

state junior club sponsor.

Plans were inaugurated for the state-wide contest on school and roadside beautification to be held under the joint auspices of the State Federation which furnished awards and judges, the

Mrs. Melchior, formerly Associate, Division of Instructional Service, North Carolina State Department of Public Instruction, is a member of the Advisory Board of the Junior Garden Clubs of America.



Courtesy Miss Louise Busbee, Raleigh, No. Car.

State Department of Public Instruction which drew up rules and regulations, the score card and helpful aids, and the Commission of Highways and Prisons which contributed the cost of printing and distribution. Scoring emphasized the degree of improvement in individual cases instead of comparative results among groups and individuals.

Use of Community Resources in Garden Education

Guidance in gardening should be of two kinds at least—that based on practical experience and technical knowledge, and that based on a knowledge of educational and scientific principles. This is a rare combination and it was not surprising to find teachers more often than not deficient in both. Fortunately our teachers were equipped with initiative and resourcefulness. They used farm agents, nearby florists and local garden club members. An effort was made to modify in-service teaching training in nature study and science, using the local environment as a laboratory, the work to take on the aspects of excursion, observation and experimentation.

A "drop in the bucket" was added when the State Federation devoted a session of its annual spring garden institute to the junior gardener. Ellen Eddy Shaw, Director of Elementary Educa-

tion of the Brooklyn Botanic Gardens, in her inspiring and original manner, demonstrated with
the juniors some basic gardening principles. Forthe most part the juniors present financed their
own way, including transportation, board and
registration fee.

Some Ways of Promoting Junior Garden Work

The public must be led to recognize and understand the educational and social values of junior gardening. Gardening is one of the happy solutions to the educator's need, for it is a human activity with practically universal appeal. Properly pursued, it makes contributions to all of the accepted cardinal aims of education through the soundest procedure - the integrating factor of purposeful working together, talking together, reading together and playing together. It interests children in their environment: it offers an experimental background for geography and science reading and it affords a genuine bond between home and school, a link between the present and the future, real carry-over values for leisure hours.

A few illustrations will demonstrate these values. Note the growth of civic consciousness in these excerpts from children as found in their comments, letters* and diaries,† or case studies.

"Our boys feed the birds now instead of killing them. Our garden beautifies the school grounds."

—From a Junior High School.

"The junior garden club helps us to see the beauties of nature and enjoy them."—From a Junior High School.

"The PTA helps us and everybody seems proud of our junior garden club."

Or the planning and working to share shown in these:

"When our coleus slips have fine long roots we shall plant them in soil. We shall cut more slips. Each one of us hopes to give a fine little plant to our mother."—From a third grade.

"On December first we carried home our coleus plants to our mothers. My mother liked hers. She said, 'I shall plant it in my porch box.' "—From a second grader.

A group of second graders made a collection of pictures and specimens which they put into a book for permanent use as a reference. This resulted in their learning to identify, read and spell

The Fletcher Junior Garden Club, Mrs. D. D. Norton, Teacher Sponsor.
 The Lilesville Junior Garden Club, Mrs. Ben Wall, Teacher

the names of a large number of the flowers common to the neighborhood as well as many not known there.

A group in the mountains gathered the rarer flowers such as hepatica and lady's slipper and made a wild flower garden.

A new school building located in a narrow mountain valley had rested under the shade of an overhanging mountainside, the bare clay walls of which had been left as a result of excavation preliminary to its construction. Under the leadership of the principal and teachers, each classroom selected a section for beautification that finally evolved into an interesting rock garden. Children voluntarily brought stones from a nearby creek, dug rhododendron and laurel for resetting, and contributed shrubs, bulbs, and seeds from home gardens.

Or the growing appreciations, broadening concepts and definite information expressed in these:

"Charles and Dewey went to the woods for some rich black soil. We shall plant our tomato seeds soon. This soil will not give our plants the wilt. Wilt is a disease that kills tomato vines."

"Today we learned the geranium, fern, sultana, begonia, and cactus. All are growing in our indoor garden. We took off the top soil and added rich new soil."

Moreover gardening furnishes numerous and diverse real life situations for using educational tools and skills, for thinking and planning that is centered about genuine problems:

"The plants seemed to need food, so we removed the soil and added fresh wood mold."

"Today we wrote for our garden books. The best letter was mailed."

"We have read the books the children bought with their tomato money last spring."

"We will exchange shrubs and test seeds."

"Sometimes I crave another life to prolong the learning I've only begun."—From a teacher.

"The blue hyacinths that Richard Dawkins brought last fall have three lovely blossoms now."

—From a third grader.

Witness these uses of the available resources to satisfy the awakening sensitiveness to beauty:

"We had no money to buy our flower pots. Walter found many little milk cans. He and William made nail holes in the bottom. Then each one of us painted a can green. Three dozen tiny cans looked neat and pretty on our window sill."—From a third grader.

Or the opportunity for meeting individual differences revealed in these concrete instances of satisfactions found in gardening:

"Charles and Dewey made two long boxes for our tomato seeds."—From the January account of the garden plans.

"We have just finished a wood chart with sixty different kinds of wood found in our community."

"Our entire community is interested and willing to help our club."

A boy of twelve, at the sixth year level, developed a book of designs on which he worked independently for the entire duration of the summer vacation. From a book of irregular drawings of homes with an indiscriminate planting, the book evolved into a series of scaled drawings, neatly done, carefully selected, and labeled with the botanical as well as common name of a wide variety of shrubs.

Lessons Learned

One teacher,* in evaluating the results of her work with the junior garden club, made the following summary:

Increased interest in the work of Luther Burbank and in creative work in gardening.

Appreciation of happiness through varied associations.

^{*} Miss Helen McLaughlin, Teacher Sponsor, Clinton Junior Garden Club.



Courtesy Miss Louise Busbee, Raleigh, No. Car.

Realization that library facilities as a source of practical information on gardening are invaluable.

Enjoyment of the new accomplishment and an increased interest in the fact that they were citizens of Clinton and that there was need for them to care for their gardens at home and at school.

More notice of designs in girls' dresses and wall paper.

More comments on roadside beauty and other beauty commonplaces.

Better standards of what constitutes tastes, harmony, beauty in texture, form, color and adaptation.

Increasing interest in the dictionary.

Certain information became a part of the pupils' fund of knowledge through their gardening experiences. They learned primary and binary colors and a number of pictures such as Millet's "Gleaners," "The Angelus," "The Sower," and the "Song of the Lark"; Corot's "Spring" and Hitchcock's "Flower Girl in Holland." They became more adept in expressing their thoughts, in writing more rapidly and legibly, in pronouncing and spelling names of common flowers, and such words as petals, sepals, stamens, corolla, and humus. They discovered there were many ways or styles to have a garden and that plant growth was due to germination which depended upon moisture, temperature, good soil and cultivation. Further, the pupils became familiar with the following rules of planting: to handle plants carefully to avoid injury; to transplant them as quickly as possible and in the evening or before a rain; to place plants firmly so that roots may take a secure hold; to shade them to prevent withering, and to use enough water and to cover with dry soil.

Through the gardening program the children were aided in their development of skills in certain curricular subjects. They developed a natural background in arithmetic through measuring and drawing the garden plot, in finding the cost of lumber and fertilizer, in budgeting garden expenses, in keeping daily records of expenses and incomes of garden, in recording the time seeds were planted and harvested, in measuring the height of the various plants in the garden, and in buying paint, brushes, seeds, vases and watering pots. There was freer participation in language

activities resulting in better oral and written reports, invitations, poetry interpretation, conversation, with better and wider choice of words and clearer pronunciation.

The children came to recognize such musical compositions as Nevin's "Narcissus," MacDowell's "To a Wild Rose," and Mendelssohn's "Spring Song," and they gained greater ability in selecting and singing appropriate and melodious songs.

And finally, as a result of working together, the pupils learned many gracious ways of living happily with one another without friction.

Teachers and Educators Must Help

It is of fundamental importance that those immediately concerned with the educational program should interpret properly gardening activities. There should be a new point of view entertained by parent and teacher alike in the recognition of these values and the necessity for a school schedule or daily schedule which allows time for the activity, space in which to carry it out, and materials and equipment with which to work. The Ellerbe and Lilesville clubs planted seeds which they sold, using the proceeds to buy a radio and books. This is an educative experience which constitutes a part of America's social insurance for tomorrow.

The subject of gardening in its full scope should be enthusiastically and intelligently presented to the school personnel in their professional meetings so that educational implications will be understood. Club women must be willing to contribute of their own influence, time and effort to establish a program that will have a far-reaching effect on the fibre of the nation.

"Lucky are those people, young or old, who know how much beauty and spiritual awareness can be gathered unto their souls from the great outdoors. To know how amazing are all other forms of life is to know more implicitly the divinity of the whole; to know more completely what to bring to our own lives. And fortunate indeed are those who have been guided in youth toward this appreciation. Today, just as truly as in the mellow reflections of Omar Khayyam, long ago, mankind has been granted a spiritual heritage—a strange deep beauty and peace—a nearness to God—out under 'that inverted bowl we call the sky.' " J. Otis Swift in The National Parent-Teacher Magazine.

The Garden Center Institute of Buffalo

WHAT PLANTS can I use to retain a steep bank where the soil erodes badly?" "My garden soil has a greenish surface. What causes this? Is it harmful to my plants? What treatment will prevent it?" "Is it possible to grow both flowers and vegetables in a plot fifty by eighty feet so that my lawn will be an inviting spot in the summer and produce, at the same time, enough vegetables for the table and cut flowers for the house?" These are typical of the questions brought to the garden center daily by amateur gardeners who find a few hours of gardening a healthful and enjoyable hobby. By answering them quickly and accurately the Garden Center Institute of Buffalo helps thousands of persons each year to spend pleasant hours in gardening, a recreation satisfying in itself and equally valuable in developing useful and attractive surroundings for the home.

Organized three years ago and incorporated under the Regents of the University of the State of New York as an educational institute to encourage the art of gardening and related subjects, the garden center has made for itself a definite place in the life of gardeners of this vicinity, and one which would be hard indeed to replace.

Services Offered

Our garden center works with the sixty garden clubs of the Eighth Judicial District of New York State, helping to plan programs and to correlate their activities. In return for these services, local garden club members assist with flower shows and serve on other committees necessary to carry out the varied projects of the Institute. Garden center services, however, are in no way limited either to the garden club member or to members of the Garden Center Institute, Located in the club house of a city park, the doors of the center are open at any time to all flower lovers. In fact, it is, in all probability, the possessor of the little garden or the non-garden club member who has but limited sources of information available who is most greatly benefited by the garden center. It is here he obtains the knowledge needed for his every day gardening activity; it is here he finds the information necessary for a general understanding of botany, horticulture, conservation and

"Organized to serve as a clearing house for garden information, to coordinate the activities of conservation, gardening and horticultural groups, and to provide all gardeners with a source of information reliable and easily obtained, the Garden Center Institute of Buffalo is to the amateur gardener what the Horticultural School is to the professional."

By MARJORIE WELLINGTON Director

nature study. The layman knows that at the garden center his questions are answered immediately and without charge. He knows, too, that only the most up-to-date and reliable information is provided to solve his problems.

Garden center services are based to a great extent on surveys of local conditions. Its work is guided largely by the questions poured into its office by amateur and beginning gardeners. We find that the majority of questions come from persons having only a small garden plot, the average city lot. These gardeners are unfamiliar with gardening technique. The inevitable need to cope with special problems, such as improving poor soils, planting in sites with undesirable exposures and disguising unsightly views, are confusing and weighty problems. It is this gardener, primarily, whom the garden center seeks to help. A call upon the Institute supplies him with practical suggestions for garden design and with planting programs which will show him how best to utilize the available space in obtaining the greatest amount of beauty and pleasure therefrom. Thus the center helps the home owner to create a successful and attractive lawn, one which results, finally, not only in increasing the real estate value of the immediate house but also in developing the attractiveness of the entire neighborhood. Through the center costly mistakes due to poorly chosen materials or frequent and expensive changes are avoided, for rather than working at random the home owner starts with a concrete knowledge of

what he wishes and, moreover, he knows in detail how best to achieve that end.

As the work of the Garden Center Institute has become better known through weekly newspaper articles and radio talks, flower shows, lectures and classes and through specialized services, there has been a noticeable increase in the numbers of gardeners taking advantage of the help and information provided. It is, of course, the gardener who avails himself of this knowledge, who applies it and finds the results good, who does most toward spreading enthusiasm for gardening as a worthwhile movement and for the garden center as a dependable aid and source of inspiration. It is his success and zeal which makes his neighbor conscious of the opportunities at hand and brings him, too, to the garden center. As may be expected, this growing garden consciousness leads to more and more calls upon the garden center, not only for services already established but also in many cases for additional and wider reaching activities. This demand, in turn, is met by the garden center. Thus is born a new service! Through it the gardener himself increases the scope of the center's work, and through the programs of the institute his interest and activity are further stimulated.

Two interesting services inaugurated a year ago to fill an apparent need have proved particularly helpful to beginning gardeners. The first is a landscaping consultation service through which amateur gardeners may have the benefit of the advice of a trained landscape architect. The second is a garden maintenance service through which any gardener may have his plant ills diagnosed by an experienced dirt gardener. Both of these features are conducted by persons interested in the work of the center. Their time is given to the Institute except for a small fee to cover expenses incurred in garden visiting.

Dirt Gardening

Each spring and fall since its organization the

garden center has held a class in gardening designed to give the amateur information needed for everyday dirt gardening. From the start this class has been one of the most popular and valuable courses conducted at the Institute. Originally the instruction was provided through lectures alone. Now, however, with the cooperation

"A garden is indeed the purest of human pleasures. It is the greatest refreshment to the spirits of man, without which buildings and palaces are but gross handiworks; and a man shall ever see that when ages grow to civility and elegance, men come to build stately sooner than to garden finely, as if gardening were the greater perfection."

—Francis Bacon.

of the McKinley Vocational School and the Board of Education of the City of Buffalo, the center has extended the study to include actual practice and experience in dirt gardening as well.

The cooperation of the McKinley Vocational School is helping greatly to enrich the program of the center. The School has a department of horticulture which trains boys of high school age in the fundamentals of horticulture so they are equipped to become professional gardeners. Five types of gardens have been designed on the school grounds, and two greenhouses form an important part of the department's equipment. The director of the McKinley Vocational School Horticultural Department conducts the garden center's practical gardening class. Amateur gardeners enrolled for the class attend lectures, observe demonstrations of common cultural practices, and do their own dirt gardening at the school under the watchful guidance and individual attention given by the instructor. It is a thorough and intensive study program. Its value to the door-yard gardener is shown by the enthusiasm of each student. As this issue goes to press, the spring class, with a registration of nearly four times the number expected, is getting under way for a ten weeks' period.

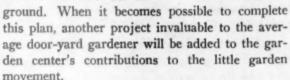
A Test Garden

Another activity started last year by the garden center, again in conjunction with the McKinley Vocational School, is a test garden. Under the supervision of a committee composed of landscape architects, horticulturists and civic-minded flower lovers, many new plant materials are grown here. The value of the test garden for the small gardener lies in the opportunity it gives him to see each year recent plant introductions grown under local conditions. The interest shown in this project proves how deeply it is appreciated, especially by the gardener restricted in his plant selections by a small budget, for he cannot afford to grow any but the flowers which most appeal to him, and

even these must be chosen carefully if he is to be assured of fine performance throughout the garden. This spring many gardeners are taking advantage of the knowledge gained last year by observation of the test garden. They may now order the newer plants with a reasonable idea of what to expect from each purchase. Moreover, the

test garden records are available, and by consulting them amateurs know exactly what procedure to follow in raising rare plant materials.

Somewhat along this same line is a plan we have for the future. It is our hope to have eventually a series of demonstration gardens. This will show the home owner the exact possibilities found in developing even the smallest of garden plots. We hope to have on hand, too. timely and detailed instructions to recommend week by week the care needed for each bit of



Up-to-the-Minute Information!

Of great importance to the home owner is the fact that the Institute brings him knowledge of new varieties and types of plant materials, new methods of culture and results of experiments in horticultural practices. This up-to-the-minute exchange of news is possible because of the close contacts maintained by the garden center with the Department of Floriculture and Ornamental Horticulture at Cornell University, with other horticultural groups and with gardening organizations throughout the nation. With the cooperation of these agencies the center has an excellent library of books, magazines, pamphlets and clipped material, all valuable sources of information in answering the questions of gardeners seeking help at the garden center. Formerly such information was difficult for the amateur gardener to obtainand then only after much delay, laborious correspondence and research. Now, at the garden center, even the most inexperienced of gardeners can keep in touch with the horticultural world. He has immediately available up-to-date and accurate information, whether it be for a garden club paper or for his own gardening duties.



Courtesy of Parks and Recreation

Viewing the rose garden at Roger Williams Park, Providence, R. I.

To supplement this library, we are particularly fortunate in having the interest of local amateur and trained gardeners, the cooperation of members of the staff at Cornell University and the assistance of experiment stations, horticultural organizations and of horticulturists throughout the country. This help is invaluable in solving those problems requiring knowledge and materials at present beyond the resources of the Institute. As an additional aid, many of the horticulturists whose names are familiar to all gardeners are presented on garden center programs so that the gardening public has an opportunity to hear them in person. During the past year, in addition to the regular classes in nature study and gardening, the garden center held sixteen horticultural lectures. Each speaker was a well-known authority. Both the advanced gardener and the novice had the rare opportunity of hearing such experts as Arthur M. Pillsbury, famed for his experiments in growing plants without soil and in producing X-ray motion pictures of plant cells and tissues at work; Dr. William Crocker of the Boyce Thompson Institute of Plant Research, who gave gardeners of this vicinity their first chance to hear of and see pictures of experiments in the use of

(Continued on page 739)

School Gardens

in a

Small Community



By J. E. LUNN
Superintendent
Independent School District No. 9
Itasca County, Minnesota

Minnesota, there are garden plots varying from one-half of a block to nearly two blocks in size, each garden being enclosed with a fence. The soil in the gardens has been carefully prepared and has been rebuilt from time to time by adding soil and fertilizers of different types. In each of the gardens is a sign stating that within the enclosure there are public school gardens. Each has a bird house erected by the Boy Scouts. Water is made available at different points in each of the gardens. Under a WPA project two years ago drainage for the garden at Nashwauk was provided to carry off spring water following the melting of snow or a severe downpour.

These gardens have been in operation for a number of years, and during the late spring and summer they present so attractive an appearance that people driving along the highway have stopped to comment on them.

Regulations in Force

The general regulations covering the garden project are as follows:

Any school boy or girl over ten years of age on June 1st in grades 4 to 12 inclusive may enroll by agreeing to the following rules:

- 1. If the enrollment is so large that gardens cannot be assigned to everyone, the number will be reduced by limiting the number as follows:
 - a. Not more than two from the same family will be assigned gardens.
 - b. Pupils who have had gardens four years or more will not be assigned a garden.
 - c. Pupils who are enrolled below the fifth grade will not be assigned a garden.
- 2. Those who have not completed satisfactory work or who have shown lack of interest or violated garden rules during other years in the club cannot be assigned gardens this year. Your gar-

den work is not completed until you have written your garden record and story. (See rule 7.)

- 3. Gardens will be forfeited if gardeners have three consecutive unexcused absences or violated club rules. (See rules 4 and 6.)
- 4. No one will be allowed in the gardens at any time outside of class hours except in urgent cases and with the consent of the instructor.
- 5. Gardeners must enter and leave the gardens through the gate. Climbing the fence will not be tolerated.
- 6. No one is to pick or to take anything from another garden without the owner's consent and the permission of the instructor. Learn to respect the property of others.
- 7. During the summer gardeners are to keep an accurate record of the amount of work done on their gardens, the amount of and value of all vegetables gown. Using this summer's records each gardener shall write a summary and a story of his garden work on the regular state record sheet of the 4-H Garden Club before October 15th. This is a requirement of the state organization.
- 8. Each gardener shall exhibit vegetables at the county fair or the local exhibit.
- 9. There will be three sizes of gardens, as follows:
- a. Large gardens for advanced gardeners—32' by 15'; b. medium-sized gardens for intermediate gardeners—24' by 15'; c. small gardens for inexperienced gardeners—18' by 15'. Some of the best advanced gardeners are given extra plots

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The School Garden Association of America

TWENTY-EIGHT years ago the School Garden Association of

America was founded for the purpose of leading people to the realization that to be educated their children must have direct contact with Mother Earth. The enrichment which has been added to the education of children in communities where opportunities for gardening exist reveals the value of the addition of this experience to the curriculum of any school in our country.

Community agencies have frequently fostered an extensive gardening

campaign to help produce the food needed in time of war or economic depression. Then the emphasis was upon the monetary value of garden crops. When the time of great food shortage passed, gardening as a widespread practice was discontinued and the educational value of the experience was disregarded. The facilities for the

project deteriorated and the children of "good times" grew up ignorant that the soil was a natural resource useful in adjusting an By PAUL H. JONES
President

"A school garden is an outdoor plot on school grounds equipped for the cultivation by children of as many different kinds of plants as the space and climate will accommodate. Every school garden should be planned attractively to grow annual, biennial and perennial plants including plants grown for vegetables, plants for flowers and for fruits, as well as woody and herbaceous plants. In the real school garden the child learns at first hand not only a great variety of natural objects, but also myriads of natural phenomena. He learns to appreciate and en-joy nature. In becoming skillful in plant cultivation he attains health and strength. Just in proportion to the acceptance by schools of this natural method of education is success in social preparation obtained."-Van Evrie Kilpatrick, Founder and First Vice-President of the School Garden Association of America.

unbalanced economic picture. The generation which is reach-

> ing adulthood today is not cognizant of the value of soil. The schools of America can help children to become more thoughtful and resourceful citizens by providing the wealth of experience which gardening education presents. A wellplanned course assists pupils to attain worthy home membership, worthy use of leisure, and a real appreciation of natural resources while they produce healthful foods and gain healthful exercise.

The officers of the School Garden Association stand ready to assist individuals, communities, organizations and boards of education to plan a gardening experience for every boy and girl in America.

Anyone who is interested in the Association's purpose is eligible to membership. The member-

ship includes people from every walk of life. Many are teachers and because of the close association with school (Continued on page 740)

Part of an exhibit of over a thousand pots of paperwhite narcissus grown by pupils of the East Mauch Chunk, Pa., grade schools. Karl H. Blanch, who is associated with the schools, is chairman of the Nature-Garden Clubs of the School Garden Association





Courtesy Chicago Park District

"In the garden more grows than the gardener sows."

Recreation departments have found truth in this old proverb, as here and there across the country gardening has been included among recreation activities for children. The lessons that boys and girls learn seem as valuable as the crops they carry home. Appreciation of public property and a feeling of personal responsibility for it are mental attitudes that every community needs to have instilled in its citizens.

Garden programs have been developed in a dozen different ways, but the motive behind each one has been concern for the happiness and well-being of boys and girls. It is possible here to report only a few of the outstanding programs in the country that suggest methods of developing the activity. Whether recreation departments have handled the program by themselves or cooperated with schools, garden clubs or park departments, it has been evident that in addition to healthful exercise and valuable knowledge boys and girls have found that gardening is fun.

A dozen boys in Middletown, Connecticut, wanted some flowers. Although they said that the lady didn't mind if they took some from her garden, the superintendent of recreation knew otherwise and discussed the matter with the lads. He learned that they would like to grow flowers of their own, but they had no land and very little knowledge of how a garden was begun. After some thought and investigation, the recreation superintendent found that there was a vacant lot in town that was in disgraceful condition, and also that the owner would be glad to have the boys use

Where They

In order to learn what recreation gardening, a questionnaire was year-round recreation. About fourteen reported well-developed tion departments said they were ing garden clubs and flower showere making plans which would

the property if they would lean it up. The same public-spirited citizen offered to donate seeds for the undertaking. That fall the boys experienced the real joy of sharing with others the flowers from their own successful gardens. Seven seasons have passed; five more vacant lots have been filled with flowers and vegetables, and during this last summer a hundred and twenty children had a happy time working together on their "own

property." The recreation department has four of the pieces of land plowed for the children; the others the boys spade by themselves. The areas are not fenced and there are no regular teachers to meet the children, but the boys and girls garden and love it.

In contrast to this program are the well-fenced, carefully supervised gardens in the New York City parks. The first School Farm was started in DeWitt Clinton Parks in 1902. Mrs. Henry Parsons stated this

The total enrollment in 1937 gardens in Cleveland Heights



ey Garden for Fun!

reation departments are doing to promote re was sent to all the cities conducting About 160 cities replied. Of these only eveloped garden programs. Fifteen recreately were engaged in some activities involvers shows, while eleven others stated they would result in programs in the near future.

purpose—to foster the growth of children as well as to teach them how to grow plants. During the thirty-five years since then the Department of Parks has set aside areas within the parks for children's gardens and maintained a Bureau of School Farms to operate them as part of the public recreation program. At the present time there are eleven gardens, and the staff consists of a director, four permanent attendants and several

six-month assistants.

The children's plots are formally arranged and uniformly planted and the gardens are bordered with flower beds and ornamental shade trees so that the whole is in harmony with the park landscape. Each garden is provided with benches, drinking fountains, and rural dipping wells, and near the gate stands a small garden house that shelters the tools and serves for a headquarters office.

The courtesy of the garden is extended to all the neigh-



One of the dipping wells provided by the New York City Department of Parks

borhood schools, and at the first planting in May kindergarten classes and other groups are assigned space to grow early maturing crops such as radishes, lettuce, beans and onion sets. However, most of the plots are given to neighborhood children who learn from a bulletin posted in the garden when the registration day will be and apply individually at that time. Each child is given a tag bearing his name and his plot number with the warning that if the tag is lost the garden will be given to some one else.

During the summer the children may come to the garden every day, morning and afternoon, if they choose. The children do all the work in these gardens, and beside caring for their own gardens they cultivate and water the flower gardens and the observation plots that are planted with peanuts, sweet potatoes, broom corn, flax, wheat, herbs, and other economic crops. Between these periods of activity there is time to hear interesting stories about plants and opportunity to learn of garden insects and bird visitors. In these gardens the children literally find a new world of living things amidst the brick and stone of the city streets.

Following the first harvest in July the gardens are planted again with beets, carrots, corn, swiss chard and lettuce. These are gathered as the crops mature, and by the first or fifteenth of October the gardens are cleared again. The final harvest day may be the occasion of a harvest festival or the long awaited presentation of awards. Parents

t in 1937 at the children's d Heights, Ohio, was 1202



"The greatest value of a garden to a

child is the immeasurable joy and

satisfaction to be gained from a gar-

den that grows. Every child should

begin early in spring to plan for his garden so that his summer may be full

of pleasurable activity and interesting flowers."—Mildred Fahy, President,

Department of Science Instruction,

National Education Association.

and neighbors are invited to the garden to enjoy the affair and help carry home the crop.

The boys and girls are encouraged to show their flowers and vegetables at the New York Herald Tribune Junior Garden Club show, and last season the Crotona Park garden won the much coveted Sweepstakes Prize.

Gardening is indeed popular with these youngsters for during this last season attendance records show that more than 200,000 visits were made by children 8 to 14 years of age.

The city of Detroit established its Department of Recreation in 1915 and since that time gardening for children has been conducted as one of the activities supported by an appropriation of Common Council. Ten years before, a committee of the Twentieth Century Club had begun this work with boys and girls and had carried it on with the cooperation of the Board of Education.

The Detroit program is handled through garden clubs that are organized at schools or community centers and operated on a year-round basis. The garden director meets the children from the 4th through the 8th grades who are interested in joining and who are willing to fulfill the following requirements for membership in the club: to make and

take care of a garden throughout the season; to keep a record of the garden; to complete the project with a report and story of the garden. After the children have their parents' approval, the club organizes and elects its own officers. Meetings are held once each week for thirty minute periods during the school day. Fall and winter lessons include bulb planting, indoor gardens, and topics of nature study that are closely allied to gardens. When planting time comes the garden club is allowed a longer period, and during the summer the garden session is from one and a half to four hours once or twice a week. In 1937 there were twenty-four playground gardens, all but one of which were on school playgrounds. Other garden clubs are formed for boys and girls who have land for a garden at home. These children supply their own seeds and tools and assume the full responsibility for the care of the garden. The Department of Recreation furnishes all equipment for the playground gardens and prepares the ground.

The Garden Division of the Recreation Department cooperates with the National 4-H Clubs, the Extension Division of Michigan Agricultural College and United States Department of Agriculture, and boys and girls who complete their record books are eligible for 4-H Achievement pins. This program helps to maintain interest from year to year, and in the past club members have received recognition for completing their eighth year program.

Picnics and parties are important features of every season, and flower and vegetable shows have many entries from garden club members.

At the present time the garden work is not as extensive as the program of the 1920's when fifty playground gardens covered seven acres of land and eighty-eight garden clubs were meeting regularly, but despite depressions and budget cuts gardening for children has been conducted in Detroit

for thirty-two seasons without a break.

Children's gardens have long been an outstanding project of the Cedar Rapids Playground Commission. For twelve years the activity has been conducted on a four months' basis, and fortunately the Commission has been able each spring to engage the same garden director. About 2½

acres of vacant land near ten schools have been loaned or rented at a small cost to the Commission, which pays for the plowing and harrowing of the lots in the spring and attends to cleaning them up in the fall. The garden director visits all the elementary schools in the city, and children who are interested may enroll for a garden. If there is no playground garden near the school, the boys and girls are encouraged to have gardens at home wherever it is possible. Last season nearly 500 youngsters applied for playground gardens and more than 1400 undertook home gardens.

During the summer, at a regular scheduled time once each week, the garden director visits each playground garden and assists the children in planting and cultivating their plots. She also conducts simple lessons in gardening of which each child keeps a record in a notebook along with a diagram of his garden, the planting date, cost of seed and the amount of produce raised. At most of these gardens the children furnished their own seeds and tools.

The home gardeners may attend class meetings at the nearest playground garden for help with their notebooks, but there is no regulation of the type or size of gardens they may choose to have. Each child is visited at home at least twice during the summer by a member of the Playground Staff.

Each year in August a picnic is held for all the gardeners, produce from the gardens is displayed and judged, and simple, unexpensive prices made possible through the cooperation of the Cedar Rapids garden club are awarded for fine gardens and notebooks.

Two communities in Massachusetts are conducting successful garden programs entirely at the children's homes. Several years ago the Recreation Division of the Park Department in Cambridge conducted a tract garden for children, but for the last four years a plan for back yard gardens has worked out very satisfactorily. The League of Women Voters assumes responsibility for publicity and materials, and the municipal department provides supervisions for the gardens.

Early in the spring, enrollment blanks are distributed throughout the schools of the city, and the children who are interested return these blanks to the recreation office. Supervisors are assigned to visit the children by districts, distribute the seeds and give cultural directions and help. Several visits are made during the summer, and a record is kept of each garden for prizes are awarded at the close of the season. The boys and girls of Cambridge are also eligible to compete in

the garden exhibit conducted by the Massachusetts Horticultural Society.

The Junior Garden Club of Framingham during its second season had a membership of over five hundred boys and girls. The idea was jointly sponsored by the Framingham Garden Club and the Park Department-WPA recreation project, and the organization and administration of the program was handled by the Park Department-WPA staff cooperating with the schools. At each school in the city the garden supervisors explained the plans for their garden club and took the names and addresses of children who seemed interested. Just

before planting time the supervisors again visited the schools, leaving seeds and plants contributed by the adult garden club members. About the middle of May the supervisors began a weekly round of visits to the children's gardens, and as the season progressed an honor roll for the week was published in the local paper. For some youngsters the high point of the season was the opportunity to exhibit their flowers or vegetables at the Framingham Garden Club's fall flower and garden show.

In Cleveland Heights, Ohio, the Recreation Department is the cooperating agency rather than the inspiration and support of the garden program. The director of gardens and nature study for the Board of Education has organized the activity so that gardening is a part of the science requirement for every grade beginning with the kindergarten and every elementary school has a garden in which each grade has its share of plots. When the school term ends individual children apply for these little gardens and an instructor meets the children at the garden two or three mornings a week. Formerly this summer program was handled by the school, but since budgets have been curtailed the summer supervision has been continued by workers from the Recreation Department. These assistants also visit the children's home gardens. When the fall term begins at school, the director of gardens attends to closing operations and the presentation of awards to outstanding gardeners.

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Courtesy New York City Park Department

Have You Ever Had a Garden?

o you always think of work when you think of a garden? That is the wrong way to start for it is not work. It is an an interesting and enjoyable occupation as well as a pastime. In past years I had not the opportunity for a garden large enough to offer a variety of plants, but finally we settled where I had every chance of a large or a small garden and my father set aside a piece of ground 15' by 40' where I could see it from the window of my room on the north side of the house. On the first day in May I spaded the ground and marked it off into seven rows. To be sure, I was a little tired, but I was also very pleased with my start and slept very well that night. Saturday, my best day for shopping, I went to town with a slip of paper on which I had the names of my plants and after each I marked the price. The whole garden cost me only 60 cents. I had carefully planned to have stem, leaf, root, fruit and seed represented, for a variety always offers a deeper interest. With the seeds my friends had given me and with my purchases I planted my first group. Watching, watering, hoeing, until the first sign of a green sprout appeared, brought me new anxiety. Then I planted a second group of seeds, so I had three full rows and four which were divided in half. When one plant had finished, as my radishes were the first to do, I planted others. In this way I had a very pleasant garden from the first of May until the last of September, and every moment was one of interest and real enjoyment which I'm sure every garden owner knows. May your next summer be one of pleasant garden memories and many enjoyable hours out of doors." Jeannette Beaver, age 16. Portsmouth, Rhode Island.

My Garden

"I have always wanted to have a garden of my

own ever since Mother planted a large rock garden in front of the house. When I became a Girl Scout I found that there was a gardener's badge that I could earn by planting a garden so I decided to have one. Mother agreed that I was to have part of the vegetable garden

HEAVEN

What is Heaven? Is it not
Just a friendly garden plot
Walled with stone and roofed with sun,
Where the days pass one by one,
Not too fast and not too slow,
Looking backward as they go
At the beauties left behind
To transport the pensive mind.
Bliss Carman.

Three Girl Scout gardeners testify to the enjoyment their gardens have brought them

on the south side of the house. So I got to work on it. I made it into a half and half garden, with flowers on one side of a path that ran through the middle of my garden and the vegetables on the other side of it.

"In the flower garden, which was an old-fashioned garden, I planted fire cross, marigold, golden marigold, balsam, zinnias, California poppies, babies'-breath, portulaca, everlastings, June pinks, candytufts, mullen pinks, petunias, phlox and cockscomb. It is a lot of fun to have flowers of your own to pick and have on the table for a bouquet.

"When the vegetables were ripe we had them on the table and they tasted very nice. Home grown vegetables right from the garden are much nicer than from the store." Jane Gilbert Knight, Providence, Rhode Island. Troop 16.

My Girl Scout Garden

"After I was invested as a Girl Scout I thought it would be fun to work for the gardener badge during my spare time in the summer, so I went right to work planning my garden. It consisted of 180 square feet, being 18' long and 10' wide. It was arranged in rows with about a foot and a half of space between each row. The flowers were in the front and the vegetables further back, with a path between. I chose alyssum as a border plant, followed by forget-me-nots, sweet William, gaillardia and zinnias. Then came the vegetables—carrots, Swiss chard and some tomato plants—of which I was very proud. To separate my garden from my father's, I planted violet and pansy plants alternately to form a

dividing line.

"It was great fun supplying the vegetables for the family's table and showing all my friends my own garden. I wish to thank the Girl Scout gardener badge for stimulating my interest." Madeline Nickerson, age 13, Rumford, Rhode Island.

Nature Education in New York City Schools

ROM LONG ages of experience with nature, man developed definite reasons

for a certain type of desirable training. These types in turn became ends in themselves. Formal education, with its numerous drills, became the dominant side of training, and for many generations nature education was forgotten or sadly neglected.

During the past twenty-five years or more, however, educators everywhere have realized the necessity for returning to our original contacts with nature, and the outcome has been the introduction of nature study in our public schools.

During recent years much attention has been directed toward worthwhile objectives for elementary schools. Courses of study, syllabi, methods of teaching, supervision, administration and school organization have been modified in the light of these objectives, which have been listed by the New York State Department as social relationships, self-expression, critical thinking, worthwhile activities, knowledge and skills, and health.

Nature education offers through class clubs one of the best and most satisfactory means of realizing these objectives. This fact has been demonstrated in New York City where for years many of our schools have carried on a series of graded class clubs. These clubs, suggested in order of their progression, are bird, nature, garden, conservation and biologic. Our experience has shown that club work, well established, provides training in respect for authority, in the recognition of the richer experiences older people have to offer, in cooperation and practice and in self-control,

By MARVIN M. BROOKS
Director
Nature Study and School Gardens

Courtesy New York City Board of Education

An attractive garden at Public School 215, Brooklyn

and develops creative thinking and the ability to judge and evaluate.

Methods Used in New York City

The gardens in New York City were developed during the World War in parks, home yards, vacant lots and on school grounds. Since that time there has been a steady and healthy growth in nature education. Each school interest-

ed in conducting a program maintains a nature room or a school garden on the grounds, or both. These serve as nature laboratories programmed for use in school hours as are other facilities such as the auditorium and gymnasium. Here children come during school hours because of their interest and the credit they receive, and teachers seek garden and nature material for use in other subjects.

We have found that this inclusion of the garden and nature room in the school program and of gardens on the school grounds, together with the financial backing and help of the Board of Education, has gone far to make our work successful. As another element in our success, we are fortunate in having in our program the assistance of such organizations as the Brooklyn Botanic Garden, the New York Botanical Garden, the American Museum of Natural History, the School Nature League, the New York Zoological Garden, and a number of museums.

The School Garden Association of New York maintains a number of services of vital assistance in the development of the city's school gardens. An organization of classroom teachers, supervisors, principals and others interested in the

study of natural sciences in the city schools, the association was founded in 1908 by Van Evrie Kilpatrick. It has a membership of 10,000. Two meetings are held each year for discussions, and in May several hundred people attend an annual luncheon. A yearly meeting for the election of officers and determination of policies occurs shortly after.

The association's Nature Garden Guide, published monthly during the school year, is edited

by the author, who is secretary of the association. This eight page bulletin contains much informational material, suggestions for activities, and announcements and notices of events pertaining to the field of nature. In addition to this service the association offers pins, buttons and certificates as awards. These are often awarded at the annual garden parties sponsored by the association at one outstanding school garden in each borough; others are given at school assemblies.

SURVEY OF NATURE GARDEN LABORATORIES In Elementary Schools of New York City—1937

	Man.	Bx.	Bkl.	Qns.	Rich.	Total	Total	of Increase
Total schools reporting	135	101	234	148	43	661	534	22%
School Gardens	30	47	82	95	22	276	264	5%
School Lawns	12	65	148	133	37	395	310	28%
School Nature Room	35	36	62	22	4	159	142	12%
Class Nature Room	100	48	90	69	23	330	(No Rept.)	
Class Room Gardens	3,366	2,294	6,674	2,715	445	16,194	14,785	9%
Nature Exhibits	107	110	343	219	40	819	611	34%
Other Nature Activities	318	234	366	378	133	1,429	(No Rept.)	
Nature Trails	11	2	5	10	5 .	33	(No Rept.)	
School Gardens-cultivated durin	g sumn	ner				170	131	29%
Gardens in High Schools						7	1	
Greenhouses						2	2	

Five hundred schools explained other nature activities as follows: Care of plants and animals, nature collections and use, nature clubs, nature plays, nature projects, nature scrapbooks, nature shows, nature study, nature visual instruction, visits to museums, visits to the zoo, nature trips, parks.

In 1935 the Abraham Lincoln High School was the only one reporting a garden. In 1937 the following high schools maintained gardens: Abraham Lincoln, John Adams, Bayside, Erasmus Hall, Evander Childs, James Monroe, Music and Art.



In 1937 there were 82 school gardens in Brooklyn. One of these tracts, located at Public School 17, is in a very congested area

Courtesy New York City Board of Education

The Fordson Horticultural Gardens

THREE YEARS AGO the Fordson
Board of Education became
interested in developing opportunities for agricultural education

in its schools. These men enlisted the cooperation of Mr. Henry Ford who willingly leased a tract of land which was accessible to several schools. After a study of the educational approach to the problem had been made, a project was begun by the students of the Maples and the Woodworth Junior High Schools and the Fordson Senior High School. This project resulted in the development of the Fordson Horticultural Gardens and the addition to the school curriculum of courses designed to give children training in gardening, horticulture and related agricultural work.

The first year 190 students participated in this program. Each one had a garden plot 40 feet by 60 feet. In these were planted fifteen different vegetable and fruit crops. A garden house was erected and equipped and an overhead sprinkling system installed. The crops produced were excellent. These products, the enthusiasm of the children, and the un-

By PAUL H. JONES Chairman of Horticulture Fordson Public Schools

animous approval of their parents, showed how very successful this type of directed work and instruction can be.

During the second year attention was centered around the type of classroom instruction required. It was necessary to write books of instruction and devise methods of teaching the subject matter.

The philosophy underlying the presentation of this material is that soil and crops are natural resources. The use of fresh healthful food is presented as the first principle of preventive medicine. The potential value of the soil and the necessity for healthful foods rather than the economic value of crop production receive primary emphasis.

Gardening could assist materially to balance the family budget. If it were practiced throughout our country it might go far toward stabilizing the home. The basic principles for gardening in America have been wrong or its popularity would not follow the curve of the index of business conditions. Gardening as recreation for the body and

the mind is as important to the individual as the food or flowers he

A close-up view of a section in the Horticultural Gardens



grows. These and many other phases that should help students to appreciate the importance of an agricultural enterprise in a nation have been given much attention in this development in Dearborn.

Gardening instruction is given in the junior high school to the seventh grade students. It is a correlation of art, mathematics, and science. An attempt is made on the part of the teachers of these subjects to instruct the children in the art, mathematics and science

related to and useful in gardening work. Through science in the classroom the student learns the history, the culture and the nature of the plant. He becomes acquainted with the soil, the seeds and the plant through his art and science studies. His mathematics assists him with garden lay out, sowing seeds and garden accounts. To make this a practical pre-gardening training, a classroom table garden made to scale is planted and observed closely.

To insure the success of this project and to capitalize on the educational opportunities presented, a course in horticulture for the Fordson Senior High School was developed. This is considered as a course in science equivalent to any other science offered and is accredited as such by the University of Michigan. This class prepares all of the materials that are necessary for the horticultural gardens. Students learn to test soil, to prepare seeds for garden use and to plant and to force bulbs. The aim of the course is to permit the student to observe and practice many of the things that are done by man to provide a food supply, to develop and to maintain a landscape, and to propagate plants for ornamental purposes



The children themselves wash, bunch and prepare the vegetables before taking them home

in the home. Such an experience makes a student better able to understand the problems of living. It arouses in him an interest in the surroundings of his own home.

The experience gained during 1935 and 1936 directed the changes desirable and necessary to make the gardens available to more children. When work began in 1937, a new garden house including two tool rooms, a shop and a classroom were available. The tract was divided into 370 gardens 20 feet by 60 feet. Students from all junior high schools in the district participated. They were transported in busses according to schedule from the schools too far removed from the horticultural gardens.

During the summer time our gardens operate in the same way as a school for ten weeks or the length of the vacation period. Classes are scheduled for five days of the week. The length of the period is one and one-half hours. This time is

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Gardens - Here, There and Everywhere

A brief résumé of a comprehensive report given by Miss Marcella Hayes, Chairman, Junior Gardens Committee, National Council of State Garden Clubs

THE NATIONAL COUNCIL of State Garden Clubs has been active for several years in sponsoring the organization of junior garden clubs throughout the nation. State Federations of Garden Clubs and local units within the State Federations have appointed junior club chairmen and committees to plan programs for training children in gardening and nature study. Appreciation of the natural world is fostered by knowledge of it and association with it. Since too many children no longer have this training at home and too few schools are equipped to handle this phase of education, garden clubs have a fine opportunity to present to children a fascinating hobby and develop in them some civic pride and responsibility.

The scope of these programs and the extent of their development are suggested in the reports from the state chairmen. Besides planning and making and caring for gardens, junior clubs learn to identify wild flowers, shrubs and native trees, to recognize song and game birds and through their discussions and field trips to understand the meaning of conservation. Projects in civic and roadside beautification can always be found to

challenge the imagination and skill of the older boys

and girls, so that the program holds almost endless possibilities. It is impossible to adequately summarize the fine work that is being done all over the country, but the following brief résumé suggests some of the many ways

that this activity has been planned for children.

In some places the children have been informally gathered together by a counselor to discuss growing flowers and vegetables. The Junior Garden Club in Riverhead, N. Y., meets its counselor one day a week for two hours to work in their tract garden which is 180 feet by 80 feet. Each of the forty-five members has a section of his own to care for. In Michigan, the junior garden club members have their flower or vegetable gardens at home.

Monthly programs of activities have been worked out in New Hampshire where observation hikes, identification contests, and pilgrimages to other gardens help the children to recognize wild flowers and birds and appreciate their beauty and the care and protection that they need.

Other state garden clubs have planned their junior programs around the subject of conservation. In Illinois the state chairman sends informational bulletins to junior counselors preceding their meetings as an aid in handling the lesson material. During the winter a study of the forest and its inhabitants and their conservation fur-

nish topics for meetings. In the spring the counselors

plan annual gardens to be cared for by the children during the summer, and in the fall sponsor flower shows and award prizes. Eighteen thousand children in Illinois are members of junior garden clubs.

The Wiscon-

The Muncie, Indiana, Garden Club displays its products at the Delaware County Fair



Courtesy Muncie, Indiana, Garden Club

sin Garden Club Federation is emphasizing conservation this year by an extensive program of tree study. Conservation Week marked the first birthday of the Wisconsin School Children's Forest of 1240 acres, nine miles from Eagle River. Last year the contributions of school children paid for planting 108 acres of this tract. Nearly 97,000 pines were set out. This year the project will be continued. With "Four Pines for a Penny" it is hoped that many more acres will be added to the forest plantation. One hundred and twenty-four Wisconsin schools operate forests of their own ranging from forty acres up to several hundred. The Federated Garden Clubs of New York State have promoted a program of tree planting in connection with the Constitution Sesquicentennial Celebration.

The Junior Garden Club organization of Tennessee has grown very rapidly. Thousands of children have received instruction regarding the care and conservation of trees, wild life and flowers through the medium of lectures, radio talks and press publicity. They also sponsored a tree planting contest.

In Michigan the Federation Garden Clubs sponsored a wildlife camera contest to stimulate the juniors' interest in protecting and conserving their state's natural resources. The children were asked to provide feeding stations for song and game birds and the smaller animals that suffer in unusually long hard winters.

Conservation Week in the Schools of Virginia was promoted last April by the State Garden Club in connection with the State Department of Education. Monday—"Wild Flower Day"; Tuesday—"Virginia's Forests Day"; Wednesday—"The Value of Birds"; Thursday—"Care of Evergreens"; Friday—"Arbor Day." There are sixteen junior garden clubs in Virginia.

In several other states the groups of boys and girls are brought together in the schools. The Garden Club of North Carolina aims to have "a state garden club in every county and every club sponsoring a junior garden club." They feel that the best way to reach the children is through the schools.

Community-wide interest in the beautification of homes, streets, and public buildings has been stimulated through the activities of the Muncie, Indiana, Junior Garden Club. The major project has been the improvement of school grounds where tons of top soil have been moved and shrubbery, trees and grass seed planted. Through

questionnaires sent to the homes of the children the club learned what had been done at home and what kinds of seeds could best be used when 5000 packets are distributed this spring.

Often the Junior Garden Club program is correlated with the regular science courses of the school curriculum. Fifty schools in Louisville, Kentucky, have outdoor gardens, fourteen of which are open during the summer under a supervisor and seven assistants. Where there is no space available at school, neighbors cooperate by offering their backyards.

In Kansas City, Missouri, the garden clubs have been active for about ten years and have co-operated with twenty-three public schools as well as neighborhood centers. Last year they distributed 25,000 packets of flower and vegetable seeds among the 10,000 junior members. Tomato and pepper plants were provided for the school children's gardens.

The Public School Division of the Garden Clubs of New Jersey was able to have a state-wide nature exhibit. The Newark Center Market was donated by the City Commission for the purpose. The children did most of the planting themselves and the many entries represented the daily classroom work of the children from seventeen schools. The exhibits included a small house surrounded by a garden; a roadside stand; a classroom window box in bloom; trays depicting the life and flora of different countries; art interpretation in murals and posters; flower containers in metal and pottery made in manual and fine arts department; and thousands of seedlings grown in classroom trays and school conservatories.

Adult garden clubs have not only planned programs for the children but have given generously of their time and material to help the juniors have successful gardens. Prizes of many kinds have been offered. Books, tools, bulbs, seeds, medals, pins and ribbons have been given for outstanding work and fine produce. In addition to the prizes furnished for junior groups that are sponsored directly, adult clubs have been very generous in cooperating with other organizations already promoting the activity.

In Cleveland, Ohio, two types of awards have been provided by the Garden Center that seem to symbolize the interest of the community in the school garden work. "The Junior Achievement Award" is for boys and girls and is given at the recommendation of the teachers who supervise

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Industry and Little Gardens

NDUSTRIAL GARDENS are often thought of only as an emergency measure in war time or in an economic depression. Investigation shows, however, that garden programs developed during these periods of pressure expansion fill a real need in the normal life of the people and persist long after the emergency has passed. There are industries in the country that have set aside suitable land near their factories for employees to use, and they have been encouraging cooperative gardening for ten, fifteen and even

Since 1914 there has been an Agricultural Society among the employees of the Norton Company in Worcester, Massachusetts, which has engaged in cooperative buying of seeds, fertilizer and other materials. The Society included not only the original applicants for company gardens but all other employees who were prepared to carry on gardening operations under its rules. A nominal charge of \$1.50 was made by the Society for each garden plot. During "good times" and verage years nearly a constant level of membership has been maintained, while in periods of emergency there has been a sharp increase in the number of applications. The Company plows and harrows the fields and stakes off the garden plots

which measure 75 feet by 50 feet. The land is free for all employees who are ready to plant and maintain a garden.

twenty-five years.

The employees of the H. E. Staley Manufacturing Company of

> The members of the Staley Fellowship Club are proud of their 300 gardens which are planted and cultivated under supervision

A brief statement regarding the gardening activities of a number of industrial plants

Decatur, Illinois, have an organization known as the Staley Fellowship Club. This club sponsors many activities, one of which is the Staley Industrial Garden. The Company turns over an area of nearly sixty acres for this purpose, which is divided into about 300 gardens 45 by 150 feet. The club employs a supervisor to manage the project and guard the property. He has the land plowed, disced and fertilized, and the lots surveved and staked off. Each year the supervisor draws plans for planting to conform to a three year rotation of crops to aid in conserving the fertility of the soil. The applicants for the gardens receive identification cards and bulletins pertaining to the preparation of the seed bed, with planting and cultural directions for the crops that have been selected. The club contracts with a local firm to furnish seeds at a discount to member gardeners. No accurate statistics on the production are kept, but the value of crop and the experience is evidenced in the continual demand for garden plots.

Since 1932 the Rock Island Railroad has set



Courtesy H. E. Staley Manufacturing Company



Courtesy International Harvester Company

aside certain plots of its vacant property under supervision of representatives of the company for the use of the employees for vegetable gardens. These gardens have been fairly well distributed throughout the fourteen states traversed by the rail-

road. The size of the plots range from six to thirteen acres. They are carefully laid out into individual gardens, allotted in the order of applications received. Preference is given to furloughed employees, part-time employees, and full-time employees, in the order named.

At the shops of the Rock Island Railroad at Silvis, Illinois, thirteen acres of Company property were drained, plowed, levelled and laid out in fifty-seven plots. Seed is furnished by the local and county relief agencies and the railroad relief committee. Information concerning methods of preparation, cultivation and insect control is secured from literature published by state and Federal agencies and from pamphlets distributed by seed companies. From year to year the same plot is assigned to the same employee if he so desires, with the result that each gardener is inclined to clean up his plot, burn all refuse, and leave the soil in good condition for spring cultivation.

Between fifty and sixty employees of the Armstrong Cork Company in Lancaster, Pa., get the benefit of healthy, out-of-door recreation that yields very satisfactory returns when harvest time arrives. The Company sets aside a tract of about twelve acres and arranges for the preparation of

During the depression years 2200 acres of land—one-twelfth of an acre for a family of two—were made available to the employees of the International Harvester Company for vegetable gardens. The Company used its own property and rented other areas after they had been examined and approved by specialists of its Agricultural Extension Department.

the land. The cost of this is pro rated and paid for by the users.

In 1933 the Garden Department was introduced at the Rouge Plant of the Ford Motor Company, and during that year 10,196 gardens were asssigned to its em-

ployees. Each year there has been a greater demand for the use of garden plots, and in 1937 there were 16,694 gardens assigned. The garden lots are 50 feet by 100 feet, and it is estimated that an area of that size will supply fresh vegetables for a family of five. During the winter months request cards are signed by those wishing gardens. Large families may have more than one plot. In the spring assignments are made so that the plots will be as near as possible to the employee's home. The Company plows all the land in the fall and in the early spring it is disced and harrowed. Besides the gardens for the employees, about 2000 other lots are prepared for school children, Boy Scouts and people not working for the Ford Motor Company. Watchmen are placed at each field, and the men chosen for these positions are able to advise and instruct inquirers about planting and cultivating their crops.

Aesthetic as Well as Utilitarian Values

The crop has been the primary motive in establishing most industrial gardens. However, there are two companies whose garden program

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WORLD AT PLAY

Annual Mountain Folk Festival ON April 4 and 5, 1938, the annual mountain folk festival for the schools and centers

in the southern highland will be held at Berea College, Kentucky. Each center has been invited to send a team limited to eight people which may give a demonstration of folk games to last not longer than ten minutes. The folk festival is held to encourage the preservation of all folk material—songs, games and play. It is not competitive in any way, and there are no judges, prizes or ribbons. "It is for the joy of playing together and for exchanging ideas."

Popular Games in Oakland TWO sports, according to the annual report of the Oakland, California, Board of

Playground Directors, have become prominent as adult activities during the past year. Softball, with the impetus of the opening of three lighted diamonds in May 1936, has attracted 191,000 players and spectators. The diamonds are being used to capacity every evening. Badminton as a co-recreational activity increases its followers constantly. Tennis also is a popular adult activity and the thirty-eight public courts are usually filled to capacity.

Nature Activities on Cape Cod AS a result of four days of "sand duning," "bog trotting," "beach combing" and beach

craft on Cap Cod under the guidance of Dr. William G. Vinal, the Massachusetts State College Extension Service has decided to organize a series of monthly nature study trips. It is planned to confer with people on the Cape who have an interest in some special field of nature, with the Marine Biological Laboratory, the State Forester, the manager of a bird farm and the Austin Ornithological Society. When Dr. Vinal's suggestions for the need for making a certain part of the Cape a sanctuary—a sanctuary for birds, fast-disappearing plants and sand dunes which may all-toosoon be "settled"—were brought before the conservation committee of one of the garden clubs, the club immediately took steps to find out more

about this area and to plan for its preservation. Dr. Vinal, formerly Specialist in Nature Activities for the National Recreation Association directed the Nature Guide Summer School at Massachusetts State College this past summer.

Inter-Club Rally for Boys

FROM three to four hundred boys together with some fathers and adult relatives gather-

ed on December 14th for an inter-club rally conducted by the Federated Boys Clubs of Somerville, Massachusetts and sponsored by the Recreation Commission. The Mayor and a number of city officials and outstanding citizens were present and took part in the program. The committee on arrangements, with representatives from each of the seventeen clubs for which the Recreation Commission provides counselors, arranged an interesting program. It included an exhibition of tumbling, a clever skit, selections by a Hillbilly band, an exhibition of ping-pong, a boxing bout, a game of basketball featuring the new rules, a harmonica quartet, vocal solos, community singing, competitive games and races, and a number of other features.

> Recreation for Tourists

TOURISTS and "winter visitants" to Tampa, Florida, found the Board of Public

Recreation ready to serve their recreational needs. A Tourist Recreation Center was opened on October 15, when visitors registered for the various clubs and activities. The Social Club held a dance late in the month with more than 100 members present. The total attendance for the month was 1,520 persons. During October, 65 units and 150 guests were accommodated at the Municipal Trailer Park where there is a recreation building. Card parties are scheduled here two nights a week and dances take place on two additional evenings each week.

"1001 Ways to Use Your Spare Time" UNDER this intriguing title Boston held its second leisure-time show in the Mechanics

Building. The exhibit was sponsored by the

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Youth Agencies Council, a division of the Boston Council of Social Agencies, in cooperation with other organizations helping to meet conditions created by the modern industrial age. Girl Scouts and Boy Scouts, the Y.M.C.A. and Y.W.C.A., boys' clubs and groups devoted to nature study and hiking; amateur astronomers, telescope makers, stamp collectors, and arts and crafts clubs and classes were among the exhibitors. The adult recreation project, sponsored by Community Service of Boston, occupied a booth, while in the arts and crafts division a portrait painter made lifelike crayon study of his model, both of them amateur artists who had learned their art at one of the art centers. Leather workers, metal craftsmen and rug weavers demonstrated their crafts. At the piano an accompanist of the Choral Division provided a musical background for other exhibitors who made puppets and properties for community theaters. The lecture and discussion group was represented by pictures and posters, and in the basement a game room was in full swing.

Nature Garden Clubs-Since the School Garden Association of America registered the first Nature Garden Club early in 1935, more than 2,000 of these groups of boys and girls, representing more than 50,000 members in twentythree states, have been formed. These clubs are being sponsored by the schools and other groups as a means of teaching elementary science in an informal manner. The activities of the clubs are easily adaptable to all age levels and clubs are registered in schools ranging from primary grades to the junior college. A leaflet giving information about this project may be secured from Karl H. Blanch, Chairman, National Committee on Nature Garden Clubs, East Mauch Chunk, Pennsylvania.

Junior Audubon Clubs — Junior Audubon Clubs, formed throughout the United States and Canada during the 1936-1937 school year, totalled

6,201 with 170,210 enrolled members. Over 5,500,000 have enrolled since the inception of the plan.

Members of the clubs are invited to take part in the 1938 essay contest on the subject, "Why Should We Have Bird Sanctuaries?" There are three divisions of the contest: (1) for teachers or other organizers; (2) for boys and girls in junior and senior high school grades; (3) for children in grades 1 to 6. The essay must be in the office of the National Association of Audubon Societies by April 15, 1938. Further information may be secured from the National Association, 1775 Broadway, New York City.

School Gardens Yield Invisible Crops

(Continued from page 695)

slag which now constitutes such a play area for most schools. Perhaps such an enlarged vision would provide a more frequent and satisfactory answer for the plaintive query of a class of fifth grade pupils from a gardenless school who, after visiting one of the tracts here described, inquired of their teacher, "Miss...., why can't we have a garden like that at our school?"

Gardening with the 4-H Clubs

(Continued from page 702)

In some states, 4-H garden club members have bought their seeds and sprays on a cooperative basis. In several states, they have also marketed their products cooperatively.

4-H garden club members participated in many activities that did much to make their work of more interest and help to them personally. Such activities included 4-H tours to the homes of the members in order to learn from the experiences of the others; demonstration team work whereby members demonstrated at community meetings what they had learned in their garden clubs, and judging work by which they learned to select quality products for exhibits and marketing purposes. At the regular 4-H club meetings, they learned much also from the discussions regarding the progress being made, the difficulties encountered and the advantages of garden club work in general. In some states, garden club posters made by the members have proved effective in influencing more young people to enroll. These 4-H garden posters include appeals for a garden such as the following:

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Horseshoe Pitching is a game that appeals to everyone interested in playgrounds. Get your free copy of "How to Organize a Horseshoe Club" and see how handily the game is adapted to your requirements.

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It supplies a variety of fresh vegetables from early spring until killing frost in fall.

It supplies certain vegetables for storage in a fresh state for winter.

It provides a surplus for canning and drying.

It is the cheapest and best way to supply vegetables.

Vegetables are necessary in a balanced diet.

It affords outdoor exercise.

It makes the farm home more attractive.

In brief, 4-H club members soon learn that a farm without a garden is like a home without a kitchen. And in learning all these things in the growing of gardens, often overcoming little anticipated difficulties, 4-H young people make surprising strides in their own personal growth and development.

Helping Children's Gardens Grow

(Continued from page 706)

helped to brighten their rooms. A number of the garden clubs of the Guild have organized children's gardens to foster the love of flowers that all children have, and to educate the young folk in their planting and cultivation, feeling that the

love of gardens, as of every other beautiful and refining thing, must increase to the end of time.

Some Interesting Experiments

In 1925 the National Guild, in cooperation with the Museum of the American Indian, undertook an interesting experiment. Six acres of land were donated by the Museum and small individual plots were laid out for children's gardens. Here were planted and grown native American flowers and vegetables in which the Museum is especially interested—tobacco, Indian corn and the like—and specimens of these plants, peculiarly indigenous to American soil, were presented to the public schools which used them as a basis for lessons in patriotism and good citizenship.

The National Guild, through the efforts of its branches and garden clubs, has made plans to establish and maintain a roof garden at Bellevue Hospital, New York City, for the benefit and enjoyment of the crippled children in the orthopedic wards. On a roof 80' x 32', the garden is to be made from plans drawn by Helen Swift Jones, landscape architect. A part of the space will be given over to the children for their own garden. A formal garden will occupy other space and will be furnished with flowering plants and evergreens in boxes. There is to be a sun dial, a bird bath and other garden features, while just outside the entrance to the wards there will be a terrace under a large awning with beds and deck chairs for the children who have to remain quiet. As a further attraction there will be a small playground with sand boxes and swings. This garden is being given to the hospital as a memorial to Mrs. John Wood Stewart, founder of the National Plant, Flower and Fruit Guild.

The Development of School Gardening in Boston

(Continued from page 709)

exhibition of the products of children's gardens held at Horticultural Hall in September of each year. This exhibition is helpful as an opportunity for practice in selecting and arranging the best products. At the most recent of these miniature fairs, 800 Boston children showed their flowers and vegetables, and won seventy per cent of the prizes with a total value of \$290.00. Through the Massachusetts Horticultural Society, Miss Marian Roby Case, owner of Hillcrest Gardens, Weston, offers bronze medals to the school and home gar-

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deners who do distinguished work, and several of our Boston children qualify for these awards each summer.

Values of the Program

The garden project has resulted in definite gains in the physical, moral and mental well-being of thousands of Boston children. They have found profitable occupation of their spare time, and will continue to occupy their leisure throughout life in a healthy hobby. They have proudly borne to their homes products grown by their hands and, in some sections, those fresh vegetables have meant a great saving and a help to their mothers. Moral training has come to them in the well-learned lesson that application to work determines the degree of success, whether it be gained in harvesting crops or in any productive enterprise.

Our boys and girls have gained a better community spirit—a pride and appreciation of the beauty of living things. From these children we need not fear vandalism in our parks or our roadsides. They know the beauty that is about them and they will help to conserve it. And during the process of their introduction to the world of Nature which they, as city youngsters, might

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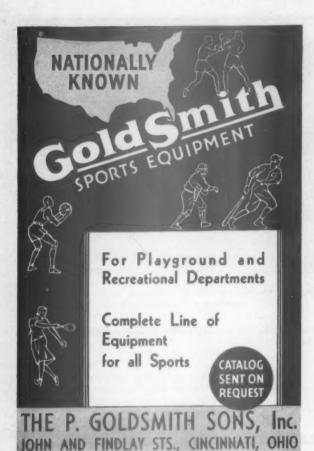
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never have understood or fully appreciated, they have had the joy of work, play and study in the open air, safely off the streets where danger always lurks for children.

As the result of early experience in school gardening many of our Boston children have been inspired to follow agricultural vocations. That we have, through this program, opened the road to new opportunity in agriculture for our boys and girls, is one of the proudest boasts of the Boston Public Schools.

Six of our former garden boys received upon our city plots the impetus that sent them onward until they now hold the coveted degrees of Doctor of Philosophy from Harvard University and are recognized leaders in agricultural science. Thirty graduates went on from Jamaica Plain High School course for further agricultural study at the Massachusetts State College in Amherst; fifteen graduates continued their education at the Stockbridge School, and many of the graduates of this course, inspired to pursue agricultural vocations by early acquaintance with school gardening, are today active in productive agriculture and related occupations, such as the distribution and processing of farm products.

Children's Gardens as a Community Project

(Continued from page 710)

ern Westchester. These trails, arranged by the Bedford Garden Club, are an excellent example of what can be done with waste land as an educational project. Trees, shrubbery and wild flowers have been carefully marked so that one may learn about a hundred various species. A trained naturalist conducted the party to a beaver dam on the reservation, which is only forty miles from New York City. They climbed through caves, studied trees and wild flowers, cooked their lunch over open fires, and were thrilled with bird calls with which the naturalist entertained them.

In November, the group visited the local garden of Dr. and Mrs. A. C. Langmuir. This garden has been developed out of an old quarry by using natural caves and interesting rock formation and overlooks the Hudson River. Other club activities were the planting of dish gardens, after a demonstration by an experienced gardener, the starting of bulbs for Christmas gifts, and the decoration of the high school auditorium for a Christmas program. These activities were carried on in regular club meetings.

We are confident that the first eight months of club activity have been successful; the children are still interested and are already talking about their gardening plans for next summer. What has made it successful when previous attempts failed? We believe there are four reasons:

- 1. The program has been planned to provide activity for every month in the year. It is not enough to have ordinary club meetings. They must be supplemented with excursions and visits to interesting gardens, nature trails and other places.
- 2. There is more interest among children in the age range from eleven to fourteen years. Younger children are usually too immature to keep up continued interest. Older boys and girls who have not had the background think they are too grown-up.
- 3. It is unsatisfactory to have more than one club leader.
- 4. Finally, the most important recommendation is to develop a junior garden club as a community project. In our community the school has the children and the time for extra-curricular activity under leadership; the garden clubs have experienced adult members who are willing to give advice and suggestions as well as provide the chil-

dren with plants and seeds; the Recreation Division fills the gap during the summer months by providing a program for club members. A close relationship exists during the entire year between the school and the Recreation Division which makes this cooperation possible.

The Garden Center Institute of Buffalo

(Continued from page 717)

chemical stimulants in plant propagation, and Harry R. O'Brien, loved as the "Plain Dirt Gardener" of Better Homes and Gardens. Among the speakers appealing to nature students and conservationists were Dr. Arthur A. Allen, author of American Bird Biographies, and Roger Tory Peterson, author of A Field Guide to the Birds. Garden club members attended meetings at which guest speakers were Ellen Eddy Shaw, Curator of Junior Education at the Brooklyn Botanic Garden, Mrs. William Crocker, President of the Federated Garden Clubs of New York State, Dorothy Biddle, editor of Garden Digest, and Mrs. Constance Spry, English authority on flower arrangement.

For this lecture program the garden center cooperated on certain occasions with other local organizations. Among the co-sponsors were teachers associations, garden clubs, farm and home bureaus, nature societies and local women's clubs. Other agencies contributing toward the support of the work by aiding in the maintenance of the center's office are the Parks Department of the City of Buffalo, the Adult Education Department and the National Youth Administration.

Work with Children

Another phase of the garden center's activity is with children. We have long wanted to work with juniors in the field of gardening, but until last spring this hope could not be realized. At that time, however, a junior gardening class was formed under the supervision of a local garden club member. Once each week the group met at the center to plant flower and vegetable seeds, study their culture and learn their characteristics while they drew paper plans for the design of garden plots at home. In early summer the annual Buffalo Evening News flower show provided classes in which the children exhibited their products. Throughout the summer the junior class met at the home of the instructor to study flower arrangement and to work out-of-doors. To



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center, goes "back to round" in-stantly—outwers any horsehide made, outperforms all other softballs!

quote the instructor, "when the children worked, a party followed-but, no work, and there was no party." In the fall again the class met at the center to study fall and winter gardening operations, but through the winter it met only once for a class in making Christmas decorations. Soon the regular spring classes will be resumed with planting of seed flats.

School Gardens in a Small Community

(Continued from page 718)

to plan and plant whatever they wish. The instructor shall assign boys and girls to the proper group depending on ability, experience, age and quality of work done during the last year.

10. After planting is completed, gardeners are to meet twice a week to work on their gardens under the supervision of the instructor. Class days and and hours will be announced later.

- 11. Independent School District No. 9 will
 - a. plow and fertilize the garden soil;
 - b. provide all seeds and plants;
 - c. give instructions in gardening during the summer;



d. award small gardening certificates upon the completion of two years of satisfactory garden work and large certificates upon the completion of three years of satisfactory garden work.

Some Additional Facts

For the sake of uniformity and general appearance, all plots of the same size are planted alike. Gardening plants and seeds are selected by the instructor of agriculture, and the plants are grown by students enrolled in the agriculture department.

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STRUTHERS BURT in the December Forum and Century—"As to the accredited upper class, if you wish to find out more about its secondary education, you can do no better than to read Sargent's Handbook of Private Schools; 21st edition. This is as necessary to the well-to-do parent as a marriage certificate. . . . A mine of pergnant quotations."

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MARCARET MEAD, Bajoeng Gede, Bali, Netherlands Indies—"I can think of no better way of measuring the changes which have occurred in educational thought since leaving the United States, almost two years ago, than a glimpse into your Handbook."

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Write for Table of Contents.

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11 BEACON STREET

BOSTON, MASS.

During the school term gardeners work in their gardens twice a week after school hours at regularly assigned periods. They are divided into small groups of about thirty. Instructions for this work are given each day, and upon completion the garden is checked by the instructor. The pupils furnish their own tools.

Demonstrations and talks on planting, thinning, hoeing, insect control, and the selection and preparation of vegetables for exhibition are given from time to time. The gardens are used for these demonstrations.

Many boys and girls have continued their project for six or seven years, until they are sixteen or seventeen years of age and are juniors and seniors in school. Many of them take full charge of the family home garden. Three boys have recently won county and state championships on their 4-H Club garden project, largely as a result of the knowledge and experience gained in their school garden projects.

We are proud of our school gardens and feel that through them and through the efforts of individual pupils a distinct contribution is being made to the reduction of the cost of living for individual families. In general a variety of foods is made available which might not otherwise be possible.

The success we have achieved is due in large part to the planning, organizing and supervising done by Everett R. Johnson, who for many years has been in charge of our school gardens.

The School Garden Association of America

(Continued from page 719)

people the annual meeting of the School Garden Association of America is held jointly with the Science Department of the National Education Association. The next annual meeting will be held in New York City, June 27th to June 30th, 1938.

For its members the Association publishes a Quarterly Bulletin. Supplies to assist in the operation of nature garden clubs are furnished upon application for club membership.

Where They Garden for Fun!

(Continued from page 723)

The Playground Athletic League in Baltimore has recently added gardens for children to its recreational program. This activity had previously

been conducted for fourteen years by the Public School system. Four gardens are located in parks, three in yards adjoining schools and two near branch libraries. All of the gardens include vegetables and flowers, but each was designed differently. Beside cultivating their gardens, the children found much pleasure in modelling in clay and paper, arranging flowers in bouquets, making bird baths and sun dials, and in gathering nature collections and materials for garden scrap books.

On the map of the United States one might circle in red the names of other communities where playgrounds are bordered with flowers and boys and girls are learning to appreciate the natural world about them through the efforts of the local recreation departments. Lynchburg, Virginia, is using all the land available for this activity and the San Francisco department employs a special supervisor of children's gardens. In Chattanooga, Tennessee, and Beaumont, Texas, the recreation departments cooperate with the garden clubs, while in Oak Park, Illinois, the Recreation Department provides a place for the junior garden clubs to meet. All the playgrounds in this community are landscaped and the director of the department reports that the play habits of the children seem to have become more orderly and disciplined since the planting was done.

Since 1925, groups of children in San Antonio, Texas, have been interested in having small plots of their own on the different playgrounds. Besides the favorable climate in that city, the Recreation Department has space with good soil to expand this activity. At the present time gardening is limited to flowers, and special mention is made of a very successful old-fashioned garden on one playground. On a series of Saturday morning hikes another group of youngsters gathered specimens of native cacti for their playground garden. Probably no garden project was ever completed more quickly than one undertaken in San Antonio by a group of Mexican boys and girls. The children brought sweet potatoes and glass jars prepared to grow vines for indoor decoration. The director told a story about the potato and the food stored in it as she described the procedure, but the next morning she found that all the sweet potatoes were gone except one and that had a large bite taken out of it! Investigation revealed that the children had eaten the project and solved the problem!

Boys and girls who have known the joy of a



garden are privileged indeed, for this experience with its valuable lessons is afforded relatively few children nowadays. Recreation departments, however, are beginning to realize that through their own efforts or by cooperating with other agencies in the community they have in gardening another valuable summer-time activity for their boys and girls.

The Fordson Horticultural Gardens

(Continued from page 728)

divided between field work and class work. The classroom is built similar to a biological laboratory. It is equipped with ample bulletin board space, side tables, microscopes, books and other library materials. Here the real business of gardening is laid before the student at the time when he needs that instruction most. Insects, flowers, fruits, culture of plants, harvesting of crops and their use as food are studied.

The setting for this open air education is ideal. It is rural. In the gardens it is hard to believe that one can live in a city and have the joy of gaining an education in such a rural atmosphere.

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From the classroom the homestead of Mr. Henry Ford's father can be seen. This lends much to the reality of the rural setting.

Developments during the past year include the completion of a potting room at the Fordson High School. This is for the use of students enrolled in horticulture. It provides the means to service the horticultural gardens and the other schools of the district doing gardening and natural science work related to the broad agricultural program originally planned for the Fordson Schools.

Our demands for gardening education have grown gradually. This work has not been forced upon the students. The virtues of the program have been permitted to produce the demand. When out-of-door gardening begins in 1938 four hundred and seventy individual plots will be planted.

Gardens-Here, There and Everywhere

(Continued from page 730)

the gardens under the school department. "The School Achievement Award" is presented to schools that enroll a certain proportion of their students in school gardening projects.

The National Council of State Garden Clubs through its various committees cooperates with many other national organizations and governmental departments whose material is available to Junior Clubs counselors. The Audubon Society, Forestry Association, Wildflower Preservation Society as well as the U.S. Biological Survey and Federal Department of Agriculture and State Departments of Conservation are included, and also Horticultural Societies and Nature Study Clubs. Parent-Teacher groups and youth service organizations have worked with garden clubs, and garden magazines and newspapers with garden pages have helped arouse interest. Bulletins from the Junior Garden Clubs of America, which is a department of "Better Homes and Gardens" magazine, have been extensively used by local clubs throughout the country.

The Junior Garden Club movement represents a general awakening to the values—both educational and recreational—that children derive from contact with the natural world of growing things. When the public demands that this be an experience for all children instead of for a few, a way will be found to provide it. The National Council of State Garden Clubs is performing a great service to youth and to the country.

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740 RUSH STREET

CHICAGO, ILL.

Industry and Little Gardens

(Continued from page 732)

stresses the aesthetic value of the experience as well as the utilitarian.

The New River Company located in Mt. Hope, West Virginia, has encouraged home gardens and awarded prizes to employees for the best yards in the community. The general office is ready to advise employees regarding species of flowers, shrubs or vegetables to plant, and during each season holds demonstrations of approved methods of insect and disease control. Equipment and standard insecticides are kept in the Company's stores and sold at reasonable prices.

In 1936 the Pennsylvania Railroad Garden Club was organized among the employees of the company to promote interest in the growing of flowers. Although the railroad management approves the club's activities, it is entirely an employees organization with 1300 members scattered throughout the country.

Two flower shows have been held in the new 30th Street Station in Philadelphia that have attracted widespread attention. Exhibits were sent from Canada, Texas and California. Another show is being planned for September 23rd and 24th, 1938.

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One Park Avenue New York, N. Y.

New Publications in the Leisure Time Field

Costuming the Biblical Play

By Lucy Barton. Walter H. Baker Company, Boston. \$1.35 postpaid.

WE ARE GREATLY indebted to Miss Barton, author of Historic Costume for the Stage, for another book on costumes. This time it is the director of Biblical drama who will profit by Miss Barton's simple and clear decriptions and by the drawings by David Sarvis. Together author and illustrator give sufficient information to enable the amateur to create costumes which will be authentic without being expensive. Of very great value to the director with a limited budget is the section entitled "Materials" in which Miss Barton suggests how inexpensive materials may be used effectively. Her suggestions for dyeing will also be exceedingly useful to the group whose funds are limited. A particularly practical and unique feature of the book is a table of materials and their uses in costuming. This should be invaluable to the costumer.

A Manual for the Nature Counselor

Compiled by John M. Roth. Federation of Social Agencies, 519 Smithfield Street, Pittsburgh, Pennsylvania. \$.50.

WHILE THIS 70 page compilation of nature material is directed to the camp counselor, it is equally valuable for recreation workers, for the aims and objectives are applicable and virtually all of the projects may be carried out on or from a playground or institution. Much of the material is in outline form and hence rather sketchy, but with the outlines and descriptions given, and by making use of the references included, the camp counselor or recreation worker can plan and carry out an interesting. all-around nature program. The objectives and philosophy behind a nature program, motivation and correlation with other activities are included, with fairly detailed discussion of nature museums, nature trails, making of aquaria and terraria and a list of projects possible in each field of nature with references and sources emphasizing inexpensive publications and materials. There are suggestions for nature hikes, capture and care of wild animals and references for nature stories, poems, talks, discussions and devotional services.

Popular Sports Their Origin and Development

By Frank D. Collins. Rand McNally and Co., Chicago. \$.10.

THE STORIES, past and present, of over fifty popular sports and games are depicted here, a sport to a page, with numerous sketches much in the style of the "Believe It or Not" and the "Strange As It Seems" features in the newspapers. It is an excellent collection bound in stiff covers and provides the recreation leader with dra-

matic, anecdotal and historical material with which to enrich his game program and to create interest in new activities. Boxing, Billiards, Football, Tennis, Field and Track, Backgammon, Chess, Bowling and Basketball are but a few of the sports and games included.

Camping and Guidance

By Ernest G. Osborne. Association Press, 347 Madison Avenue, New York. \$2.00.

THE DISTINCTIVE contribution of this book to the theory of education in the summer camp is the insistence on an understanding of the individual by camp leaders and the adaptation of program resources and leadership to his needs. The author, a member of the Child Development Institute of Teachers College, Columbia University, presents simply and concretely the potentialities of the soundly organized camp, stressing continually the importance of developing the whole personality of the child.

The Conduct of Physical Education Its Organization and Administration for Girls and Women

By Mabel Lee. A. S. Barnes and Company, New York. \$3.00.

T IS THE AUTHOR'S earnest hope that "this book will inspire a sound philosophy of the fundamentals of organizing and administering physical education according to the highest professional standards and ideals." The book in itself is a justification of its author's hope, for in this comprehensive and carefully worked out volume organizers and administrators of programs and physical education directors of girls and women and recreation workers as well, will find information which will help them in making their programs not only sound in theory and practice, but rich in content. Miss Lee has incorporated a wealth of material on appraisal of activities, program problems, facilities and equipment, health and safety programs, cost information, and helpful data on administrative procedures. And throughout is the insistence on standards and ideals which is fundamental to a sound program.

10 One-Act Plays

Selected and Edited by Fred Eastman. Willett, Clark & Co., Chicago. \$2.00.

In this book Mr. Eastman is concerned with providing plays that may develop strength and beauty in the inner life. Finding an increasing demand for plays of this type Mr. Eastman has read hundreds of plays from which he has selected ten, while within the capacity of amateur groups, do have important and gripping conflicts, worth while to the player and capable of sending the audience away in exhaltation of spirit. The plays are:

Pawns by Percival Wilde; Prize Money by Louis Wilson; Monsignor's Hour by Emmet Lavery; The Great Choice by Fred Eastman; He Came Seeing by Mary P. Hamlin; Tidings of Joy by Elizabeth McFadden; The Tail of the Dragon by Elitott Field; The Lord's Prayer by Francois Coppee; Twentieth Century Lullaby by Cedric Mount; Peace I Give Unto You by Dorothy Clarke Wilson.

Games for Two.

By Gloria Goddard and Clement Wood. Hillman-Curl, Inc., New York, \$1.45.

The alternative title of this book, "How to Keep the Reno Wolf Away from Your Door," suggests the tone of the volume. The book is divided into four sections—Card Games; Other Games; Games of Culture, and Games for Partners. The emphasis throughout is on card games. Directions are presented in a clear, concise manner, and throughout the volume there are excellent photographs and diagrams. Individuals and groups planning for parties which are somewhat sophisticated will find the suggestions helpful.

Shellcraft.

By Ruth Lippincott Walworth. Geddes Press, Fort Myers, Florida. \$.60.

Have you ever thought of the ornamental and utilitarian articles which can be made from shells? In this booklet the author describes fifty-three articles which she has created. These include birds, mammals, reptiles and amphibians, novelties, tallies and place cards. And, in addition, there is interesting information about the shells used in making them, introducing their scientific names. Fifty-three illustrations accompany the text.

Parkways and Land Values.

John Nolen and Henry V. Hubbard. Harvard University Press, 1937. \$1.50.

This is a very careful and considered study and analysis of the functions of parkways, methods of financing them and their effect on property values. Detailed study was confined to a few specific examples, the parkways of Boston and the Boston Metropolitan District, Kansas City and Westchester County (New York) being those chosen. These were selected as Boston has a metropolitan (regional) system of parkways, Kansas City a municipal system, and Westchester a county system. Boston and Kansas City have old systems offering opportunity to study results after a long period of years, whereas the Westchester system is recent and embodies modern ideas of planning for traffic and recreation purposes. The analysis of these parkways covers general background, administrative organization, design, regulation of use, cost, methods of acquisition, financing, assessement, and economic effects on property. The discussion on the various factors that enter into an appraisal of increase in land values which can be attributed to parkways is of particular importance.

The Circus Is in Town.

The Crowell Publishing Company, New York. \$.15. New suggestions for amateur circuses are always in demand! "If you want to have a party that's 'as much fun as a circus'—have a circus!" says the introduction to this attractive booklet. "Whether you are planning a purely social time or combining profit with pleasure, the amateur circus will prove popular." There are ideas galore in this sixteen page booklet.

Stories Behind the World's Great Music.

By Sigmund Spaeth. Whittlesey House, McGraw-Hill Company, Inc., New York. \$2.50.

Through this book we catch a penetrating and intimate

glimpse of nearly twenty musical geniuses whose names are known in every household. We meet such figures as Bach, Mozart, Schubert, Mendelssohn, Verdi and Wagner—to mention only a few. Episodes, anecdotes and happenings, public and private, in the lives of these musicians are so dramatically portrayed that in brief space we glimpse the individual personality traits and most significant events in the life of each and discover the story behind the composition of many a well-known piece of music. In addition there is a chapter on the history of music and several on the stories behind famous songs—songs of the British Isles, Germany, France, Italy and America. Music groups will find this book valuable for its succinctness, dramatic contrast and readability, and yet anyone who picks it up will have difficulty in putting it down before the end, whatever his musical background.

Magic Ring.

Edited by Ruth A. Brown. The Seven Seas Press, 1124 Detroit Bank Building, Detroit, Michigan. \$2.75. Magic Ring is a collection of poems hundreds of girls have loved. Before it became a book of poems it was a poetry game played by the girls around their camp fires and along their mountain trails. The 350 selections which the book contains have been chosen with rare good taste from the world's best poetry, and there is also a section containing a group of poems written by the girls themselves.

All who love beauty will appreciate this delightful collection which will do much to enrich the program of camp assemblies and evening camp fires of Girl Scouts, Boy Scouts, Camp Fire Girls and similar groups.

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